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**Guidelines for campus beautification with special reference to  
Seventh-day Adventist academies and colleges in North America**

**Boughman, Larry Wayne, Ph.D.**

**Andrews University, 1991**

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Andrews University  
School of Graduate Studies

GUIDELINES FOR CAMPUS BEAUTIFICATION WITH SPECIAL  
REFERENCE TO SEVENTH-DAY ADVENTIST ACADEMIES  
AND COLLEGES IN NORTH AMERICA

A Dissertation  
Presented in partial fulfillment  
of the requirements for the Degree  
Doctor of Philosophy

by  
Larry W. Boughman  
April 1991

**ABSTRACT**

**GUIDELINES FOR CAMPUS BEAUTIFICATION WITH SPECIAL  
REFERENCE TO SEVENTH-DAY ADVENTIST ACADEMIES  
AND COLLEGES IN NORTH AMERICA**

**by**

**Larry W. Boughman**

**Chairman: Edward A. Streeter**

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ABSTRACT OF GRADUATE STUDENT RESEARCH  
Dissertation

Andrews University  
Department of Education

Title: GUIDELINES FOR CAMPUS BEAUTIFICATION WITH SPECIAL  
REFERENCE TO SEVENTH-DAY ADVENTIST ACADEMIES AND  
COLLEGES IN NORTH AMERICA

Name of researcher: Larry W. Boughman

Name and title of faculty adviser: Edward A. Streeter, Ed.D.

Date completed: April 1991

Problem

Few recognize the potential between campus beautification and the enrichment of the institutional programs or the responsibility role of stewardship for school lands. Often, campus beautification has not been considered an important item in capital outlay.

Method

The study utilized the descriptive method. Literature was reviewed to gather concepts related to campus beautification that could be applied to SDA academies and colleges. Ideas were gathered from personal contacts with

chairs of other institutions in the area of landscape architecture and from the fifty states that had published guidelines for campus beautification. On the basis of the ideas and information gathered, guidelines for campus beautification with special reference to SDA academies and colleges in North America were developed. SDA principals of academies and presidents of colleges were asked to place a value judgement on each item. The guidelines were sent to a panel of judges for validation.

### Conclusions

Major conclusions drawn as a result of information and experience gained during the course of the study were:

1. There is a need for guidelines for campus beautification especially in SDA academies and colleges in North America.
2. There is a relationship between campus beautification and the education process.
3. The design, planning, and development of campus beautification is a complicated process which needs the input from several sources.
4. Campus beautification can be achieved within a limited budget by carefully planning the project in phases.

### Recommendations

Based upon the findings of this study, the following recommendations are presented for consideration.

1. The guidelines developed in this study should be

adapted to meet the specific needs of each campus.

2. Short training seminars should be developed to prepare educators and others concerned with campus beautification for educational institutions.

3. The campus beautification guidelines developed in this study should be field tested by those committees planning to build a campus or those wanting to further develop a current campus.

4. In planning for campus beautification, a budget should be implemented and maintained.

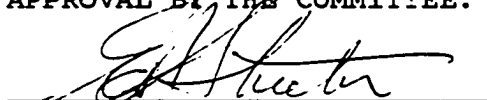
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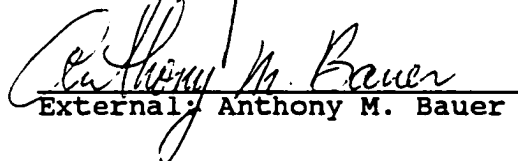
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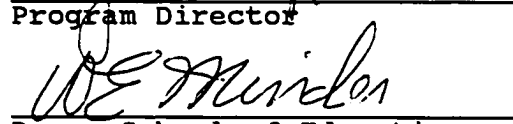
  
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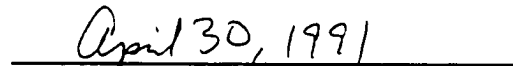
  
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Dean, School of Education

  
Date approved

This dissertation is dedicated to my dad  
who passed away on January 20, 1991.

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## CHAPTER I

### INTRODUCTION

#### Background

The historical development of campus beautification in colleges and other educational institutions can be traced to the very beginning of formal education. Some colleges and universities considered it a very important part of the total plan, others did not. Nevertheless, landscape design has proved itself to be of extreme value to the educational institution (Jellico, 1966).

Of all the arts, none takes so long to come to maturity, and none is so liable to deterioration and destruction as landscape design. However, it is one of the great arts, and this study is directed towards an exploration of this art and how it relates to educational institutions.

From a historical viewpoint, right after the Garden of Eden, beautiful settings were not made but discovered-- here, a clearing in the forest, there a valley enclosed by mountains, or elsewhere an island surrounded by blue and green water. In the oldest available accounts, such spots were natural, they just happened, and no work was needed to

keep the places in order. Such settings often had names that indicated its location: grove, paradise, park, garden, wilderness, and meadow. When humans could find such places, they felt different because of the atmosphere surrounding them. Many chose to live in such areas because of the beauty they provided (Thacker, 1979).

Given this natural bent of most of humankind, it is not too surprising to note that as people have developed schools and universities through the centuries, they have become more and more aware of the value of surrounding these places of learning with beauty. However, that awareness has not always been shared by educational leaders, and is reflected in the campus design of each institution.

For many years the material things of education, whether inside or outside, were given very little attention. Education consisted of only two elements--the teacher and the learner. In this mind set, the setting was incidental to the learning process. To the ancient Greeks, the school was wherever the teacher and pupil happened to be, and often times that was outside (Castaldi, 1977).

This perception of education remained for hundreds of years. President James Garfield once stated that the best type of school was a log with a student on one end and Mark Hopkins on the other. However, with increasing population and an ever greater need for organized instruction, the

educational setting gradually began to emerge. Thus, to better understand the American campus, one must briefly examine some of its predecessors.

### Ancient Beauty Spots

The word "academies" refers to the grove of trees planted in honor of Academus in fourth-century-B.C. Greece. Here, Plato and Socrates, sheltered from the relentless Greek sun in the cool of the shade of an olive tree, met with other inquisitive minds to discuss the nature of existence (State University of New York, 1988).

There are many references to outdoor schools in antiquity. For instance, the Old Testament records the groves dedicated to Baal, which were destroyed by the Israelites. History notes that the Romans, upon arrival in Britain, remarked on the groves used by the Druids for study. Outside the walls of Athens are the groves of the Academy (an enclosure scattered with tombs and monuments)--one of the earliest places of study. This natural, untended quality of the grove reappears throughout the centuries and seems to mark the landscape as the natural side of art (Thacker, 1979).

### Medieval Developments

Gardens, or landscaping within the context of the academic setting of medieval times, first came about with

Oxford and Cambridge colleges, where gardens and special landscaped areas were made within the quadrangle.

During the medieval period, the quadrangle evolved into the English "collegiate" system initiated at Oxford and Cambridge. Here, one notes the development of a community of specialized buildings for living, learning, and worshipping all enclosed in a common courtyard known as courts (State University of New York, 1988).

Batey (1989), commented on the gardens of Oxford and Cambridge, and pointed out that the gardens often were the inspiration needed for developing the intellect. She stated that records revealed accounts promoting the necessity of the gardens to foster excellence of training. Professors and students spent long hours sitting in the gardens contemplating the things at hand. The gardens were considered a source of inspiration and as part and parcel of the philosophy of simplicity and excellence for the students as well as the professors. She maintained that the gardens were regarded as essential, in fact, more necessary to the colleges than good professors.

Batey continued by saying the designs of the gardens similar to those of Oxford and Cambridge were not easily developed. Several groups had to be satisfied: Professors were consulted and each had his own idea, the supporters of the theatrical society had their ideas, and then advocates of a natural setting gave their input.



### The 18th Century

By the second half of the 18th century, few colleges in England had any concept of campus design. Lancelot Brown (1716-1783) developed many sites with the "capability idea." He said that each site had capabilities, and in his mind, he would develop those capabilities for each particular site. It was as if he were inspired for each site in relation to its capabilities. Brown, through simple, open design, would develop the "spirit of the place." For this reason, he became known as the great landscape artist of his day (Thacker, 1979).

Often, a mound or small hill, either in the middle or more often to one side against the wall, served as a vantage point from which the attractions of the landscape might be seen. Although few of these mounts (mounds) have survived, the mounts in the gardens of Oxford and Cambridge colleges have been partially preserved within the design concept (Thacker, 1979).

Later, at Hohenhiem, near Stuttgart, Germany, Herzog Eugen von Wurttemberg (1737-1793) worked to develop a unique landscape concept for Hohenhiem University by constructing the campus over the ruins of an antique city. Here and there, fragments of the wall, tower, or archway were allowed to protrude from the greenery, given a unique statement and preserving the appearance of a subsequent settlement. It was these European models, in which the

university is conceived of as a community, that provided inspiration for the American campus.

### American Campus Development

Landscape architecture in America has a relatively short history compared to that of Europe, yet Americans have become increasingly aware of the need to provide and preserve significant landscapes for future generations.

Some of the first gardens and landscapes of America were associated with important persons such as George Washington and Thomas Jefferson. Other landscapes of early importance surrounded such places as the capitol buildings and governors' palaces (Turner, 1989).

### Colonial Period

In the early days of education, little regard was given to the development of the landscape around the school. The first type of secondary school in the colonies was the Latin Grammar School, established in Boston in 1635. It was, of course, a replica of similar schools in England. Toward the end of the Colonial Period, men like Benjamin Franklin began to see the need for a new type of education to meet the needs of society. By the close of the 19th century, the American public had endorsed a free, tax-supported public-school system that would help to provide the type of setting necessary for optimum learning (Callahan & Clark, 1977).

Yale University, founded in 1701, was one of the first to be concerned with campus beautification. By 1782, the school had grown so much that the original buildings were removed to make way for College Row, an alternating pattern of dormitories and meeting halls that established a nearly continuous wall along the street. Under the influence of John Trumbull, the informal aesthetic adviser, College Row became the first example of an American campus deliberately planned to meet both functional and aesthetic criteria. The red brick dormitories and classrooms had small, symmetrical yards along College Street, bordered by a low wood fence. In the back, beyond the privies, Trumbull planted a picturesque English garden. Most campuses during this time were located in what was viewed as the virtuous countryside, detached from the temptations of the city (Stern, 1986).

In 1770, the term "campus landscape" was first used to refer to the surroundings of Princeton University. However, that term contains some redundancy. The Latin word "campus" means a field, often scattered with trees. Thus, campus literally means landscape (State University of New York, 1988).

#### The Jeffersonian Concept

Thomas Jefferson pioneered a new type of school rooted in a humanist conception of society. By background and vocation a countryman, Jefferson expressed throughout his

life a strong aversion to the city and a preference for a rural way of living. "Those who labor in the earth," he wrote, "are chosen people of God, if ever He had a chosen people." Wherever Jefferson was, he tried to make the surroundings more beautiful (Jackson, 1970).

Acting as both educator and architect, Jefferson brought a new kind of school into being. He called it his "Academical Village," and his idea was to locate the school out of the bustle, temptations, and conflicts of the city. When Jefferson founded the University of Virginia in 1817, he located it a mile outside the barely settled village of Charlottesville.

Jefferson seemed to have an interest in the setting when he stated:

It is infinitely better to erect a small and separate lodge for each professorship, with only a hall below for his class, two chambers above for himself, joining these lodges with a covered way to give a dry communication between all the schools the whole of these arranged around an open square of grass and trees. (Stern, 1986, p. 121)

### The Developments of the 19th Century

In 1853, the first village improvement association was founded in Stockbridge, Massachusetts. "Improvement" meant beautifying the common, the cemetery, and the roads leading into town. The example spread rapidly, and one village after another undertook to adorn its various public areas including the campus of the local college or seminary with greenery (Jackson, 1970).

### A New Awareness of Landscaping

By the 19th century, the landscape concept design began to turn away from the natural place, from developing the capabilities of the site, and started to add artificial elements. Humphry Repton (1752-1818) introduced such things as the fountain, the greenhouse, flower beds, a terrace, or a drive to soften the natural designs typical of those used during the 17th century. By the late 19th century, some campus designers started to use design concept from the beginning when planning a new campus, but for the most part, the idea of campus beautification was new and was incorporated at only a few institutions.

### A New Wave of College Founding

The second phase of college founding, starting before and continuing through the Civil War, extended the colonial aesthetics of greens to include tree-lined walkways, buildings, and plantings. These aspects of campus beautification were incorporated into the design of Bowdoin in Maine, Dickinson in Pennsylvania, Davidson in North Carolina, and Wittenberg in Ohio. An outstanding example, founded in 1837, is Mount Holyoke College in Massachusetts with more than 800 acres that include four open quadrangles overlooking a small lake and, beyond the Prospect Hills, woodlands, trails, paths, and a wildlife sanctuary.

One carry-over from Jefferson's concept can be seen in the locating of the U.S. Navel Academy. Stern (1986)

remarked that, in 1845, the U.S. Naval Academy was established at Fort Severn in Annapolis rather than at the Naval Asylum in Philadelphia, reputedly on the decision of Secretary of the Navy, George Bancroft. A university man, Bancroft was convinced that a campus should be designed at a "healthy and secluded" site away from the "temptations and distractions" that necessarily connect with a large and populous city.

Such examples in campus development were still relatively rare. American schools made very little progress in the area of campus beautification. They were simply places where students came to learn from the teacher. Little thought was given to the appearance of the building and grounds, which were officially described in 1844 in New York as "naked and deformed" (Knight, 1951).

#### Concerns of the 20th Century

In the United States there are more than 3,300 campuses of higher education. For the most part these are pleasant places to visit. The landscape architect's work is visible from coast to coast, from Stanford to Amherst College with its hilltop location. An extraordinary range in campus type, extent, and use of landscape reflects the climate and acreage available and speaks of cultural values. America's first colleges, Harvard, Yale, and Brown, each more than two centuries old, began with modest yards and greens, as did Dartmouth and Princeton. The landscapes of Harvard, Yale,

and Brown evolved, though constrained by limited land ownership; Princeton and Dartmouth were extended generously into their rural surroundings.

Recognition of preservation of important historical sites began to grow in the 1930s. This new commitment to protect *tout ensemble*--the sum of the buildings and open spaces--rather than just individual structures also moved to preserve the landscape of educational institutions. Now, landscapes are considered important on their own merits, rather than principally in association with a famous person or building (Turner, 1989).

#### The Advent of Specifications

Educational specifications began to emerge by the beginning of the 20th century, but it was not until the 1960s that researchers began to write in earnest about the great need for specifications. It was during the 1960s that criticism of the school as a part of one's life intensified, and school buildings and their surroundings were condemned as dehumanizing and impersonal places without any human warmth. The school's monopoly in the matter of preparing students for adult life was contested and new educational structures were being advocated (Hallak, 1977).

State legislatures required that educational specifications be developed, not only for new buildings but also for old buildings, and the specifications guidelines could also be used for site preparation and landscaping.

This helped the development of school buildings and grounds and it became evident that location and beautification of schools were important factors.

### Landscapes to Create a Sense of Place

Distinctive landscapes help create a sense of place: the informality of the original Radcliffe Quadrangle versus the mannerly sculptured garden of the University of California. The enchanting Sarah Duke rose gardens at Duke University (1838) provide tranquil enclaves near the busy central campuses.

Different types of trees and a variety of ground cover proclaim regional differences. Simson College (1860) was laid out to look like an urban park, a nice gesture amid prairie and farmland. The University of Miami campus (1925) is wrapped around a palm-rimmed artificial lake. All campuses are truly pedestrian precincts, which provide special opportunities to their inhabitants to experience the intertwining of architecture and landscape for aesthetic enjoyment (Dober, 1989).

The rise of the modern university brought about formal designs inspired by romantic interpretations of Gothic, Georgian, and classical architecture. Monumental enclosed quadrangles can be found at Ohio State University (1870), the University of Chicago (1891), and Southern Methodist University (1910). Typically, the concept includes a visually commanding building and open spaces.



### The Emergence of an Adventist School System

During the latter part of the 19th century, while the American public-school system was emerging, the Seventh-day Adventist denomination was beginning to develop its own educational system. In 1872, the first official Seventh-day Adventist school was established. It was housed in a little frame building, 20 by 30 feet on Washington Street in Battle Creek, Michigan (Spalding, 1962).

Since that early beginning in 1872, the Seventh-day Adventist Church has developed a world-wide educational system. In this system, there are universities, colleges, academies, and elementary schools. For the most part, the institutions in North America have developed attractive campuses through guidance from various committees, but without specific guidelines.

While the Seventh-day Adventist Church does not require educational specifications to be developed for each new school building, its Department of Education strongly recommends that they be developed.

In 1977, the General Conference of Seventh-day Adventist Department of Education prepared a document entitled Learners Live Here: Seventh-day Adventist School Planning Guide. This publication gives guidelines for educational plant planning. It has proved useful in assisting Adventist educational planners in developing specifications. The booklet gives helpful information

especially for the unique situations faced by planners of Seventh-day Adventist schools and has several recommendations on the use and beautification of the grounds.

In 1980, the Educational Facilities Planning Laboratory at Andrews University, under the leadership of Dr. Edward Streeter, developed Guidelines for Developing Educational Specifications, a guide primarily concerned with buildings but also including ideas on campus beautification. It is now in use by the North American Division Office of Education for the Seventh-day Adventist church (Streeter, 1980).

#### Statement of the Problem

Educational leaders and architects have learned to combine instructional programs with buildings to produce highly functional entities. However, very few recognize or comprehend the potential between campus beautification and the enrichment of the institutional programs or the responsibility role of stewardship for school lands (Postman, 1978).

All too often, campus beautification has not been considered an important item in capital outlay. A site is procured that has rich potential, but for lack of funds, it is left year after year undeveloped, untended, and unused. This is neither good economy nor effective planning.

Improvements to the environment that add immeasurably to the effectiveness of the total school plant as a teaching facility can frequently be added at relatively small cost through landscaping (American Association of School Administration (AASA, 1960c).

#### Purpose of the Study

The purpose of this study was to research the literature in the area of campus beautification, to gather data on campus beautification from educational superintendents of the fifty states in the United States, to gather materials from professional associations that are concerned with campus beautification, and develop guidelines for Seventh-day Adventist academies and colleges in North America.

#### Questions to Be Examined

The following questions need to be answered:

1. What is the relationship between campus beautification and the education process?
2. How can the school grounds be made more beautiful?
3. What is the responsibility of the administration in the area of campus beautification?
4. How can campus beautification be achieved within a limited budget?

#### Importance of the Study

Attractively designed, well-maintained lawns, gardens, trees, and shrubbery can help create a positive first im-

pression, establish a peaceful mood, and increase property value (Bluford, 1988).

The least costly way to improve the public appearance of a school is to improve its landscaping. Planting a few well-placed trees to add to the beauty, controlling erosion, and creating a good lawn that is easily mowed are important steps in a beautification program.

The school grounds, if they have adequate care, can make major contributions to student progress. This care includes clean, attractive, comfortable, and orderly surroundings; it creates a physical environment conducive to mental and physical alertness of both teachers and pupils. This environment, or climate for learning, promotes efficiency in teaching and learning. Moreover, a wholesome school atmosphere improves pupil morale, contributes to their aesthetic development, promotes respect for school property, and develops other desirable character traits (AASA, 1960a).

In summary, it could be said that the ultimate principle of landscape design is merely the application and adjustment of one system to another, where contrasting subjects are brought in harmonious relationship resulting in a superior unity called order (Simonds, 1961).

Hopefully, this study will provide additional information in regard to campus beautification that more and better educational requirements may be developed so the Seventh-day

Adventist school campus can be the most beautiful in the neighborhood.

#### Definition of Terms

1. Administrator is the person who is ultimately responsible for campus beautification--usually the principal or president.
2. Aesthetics is a branch of philosophy dealing with beauty and the beautiful especially with judgements of taste concerning them.
3. Beauty is the quality or aggregate of qualities in a person or thing that gives pleasure to the senses or pleasurably exalts the mind or spirit.
4. Beautification is that desired quality which can be achieved through the arrangement of flowers, shrubs, trees, lawns, fences, buildings, pavement, and water.
5. Campus is a Latin term for "field". It is an American coinage, first used in 1775 to describe Princeton's leafy grounds. In this study the term campus means the grounds of a school.
6. Environment is the sum of the factors that combine to create a learning situation. The school's environment can be divided into (a) physical environment which includes, for example, the thermal, acoustic, lighting, and aesthetic aspects of the school plant and its surroundings and (b) psychological environment which includes everything

outside the individual to which one responds and with which one interacts, either consciously or unconsciously.

7. Garden is that area that is cultivated to produce something for human consumption, or an area that is cultivated for beauty and aesthetics.
8. Guidelines are an indication or outline of policy or requirements to be followed in planning campus beautification.
9. Landscaping is done to create the best aesthetic function and personal environment to a given portion of land, producing a naturalized setting, using materials compatible with and dependent on natural elements.
10. Local Conference in the Seventh-day Adventist denominational structure is that geographic area (usually a state) in which several churches and their institutions are banded together for administrative purposes.
11. North American Division of Seventh-day Adventists consist of the SDA churches, institutions, local conferences, and union conferences in the United States and Canada.
12. SDA is an abbreviation of the name of the Seventh-day Adventist Church.

13. SDA academies are secondary schools, many of which are boarding schools, owned and operated by the Seventh-day Adventist Church.
14. SDA colleges are boarding institutions of higher learning owned and operated by the Seventh-day Adventist Church.
15. Seventh-day Adventists are a conservative Christian denomination functioning on a world-wide basis with churches, hospitals, schools, and colleges operating around the world. The membership of the church is approximately 6,000,000. The members worship on the seventh day of the week (Saturday) and believe that Jesus is soon coming back to the earth to take the righteous to heaven.
16. Union Conference in the Seventh-day Adventist denominational structure denotes a geographic area comprised of several local conferences with their churches and institutions which are banded together for administrative purposes.

#### Limitations and Delimitations of the Study

In addition to the limitations imposed by considerations of time and finance, the following delimitations apply:

1. The guidelines are intended for use in Seventh-day Adventist academies and colleges in North America.

2. The source for the identification of the essential elements involving campus beautification is the related literature reviewed, published guidelines from the public-school systems, feedback from principals of SDA academies and presidents of SDA colleges, and the insights gained from interviews held during the course of the study.

3. The study deals only with the responsibility of the educational administrator as it relates to campus beautification. It does not deal with different techniques of planning.

#### Organization of the Study

Chapter 1 contains an introduction and historical overview to the study, the statement of the problem, the purpose of the study, and questions to be answered. It also discusses the importance of the study, has a definition of terms, states limitations and delimitations, and provides an outline of the organization of the study.

Chapter 2 contains a review of the literature and research relating to campus beautification. The first part of the review deals with material in the general area of campus beautification. The latter part considers more specifically the literature and research that has to do with campus beautification for Seventh-day Adventist schools.

Chapter 3 outlines the methodology of the study,



indicating the way data were gathered. This includes the preparation of the guidelines and the selection of the panel of judges.

Chapter 4 presents an analysis of the data on campus beautification, including tables of available state requirements, and the results of the guidelines returned by principals of SDA academies and presidents of SDA colleges in North America.

Chapter 5 provides campus beautification guidelines modified to incorporate the suggestions from principals, presidents, and the panel for Seventh-day Adventist academies and colleges in North America.

Chapter 6 presents the summary, conclusions, and recommendations for further research.

## CHAPTER II

### REVIEW OF THE LITERATURE

This chapter reviews available literature on the importance of campus beautification. Mankind has desired pleasant and beautiful surroundings throughout history. Millions of dollars have been spent for the landscaping and development of large and small expanses of land with flowers, trees, shrubs, and water to provide living quarters with a peaceful and relaxed atmosphere. The desire for this kind of beauty is reflected in homes, businesses, government offices, churches, and educational facilities.

#### Overview

As mentioned in chapter 1, the earliest schoolhouses in America were single structures, constructed from local materials or, as Sloane (1972) observed in some cases, simply the occupying of an abandoned building. Obviously, in this situation, little thought was given to the appearance of the building, not to mention the grounds.

Progression in the design of American schools was very slow during the 17th and 18th centuries. Some schools were simply shelters in which the pupils and teachers came

together. As industrialization and urbanization came along in the 19th century, and with a rather rapid population growth, there came a need for the education of large groups of students. Sloane indicated that all types of buildings were put into use as schools. As the need for more and better schools increased, the need for organization and planning became essential.

This organization and planning led to carefully planned schools in America, and have included the development of its nearby surroundings. Leaders in educational facilities design build into the master plan proposals for beautiful surroundings because of the importance for natural beauty and peace of mind for students and teachers alike (Turner, 1984).

Of all the activities in which the American people engage as they live and work together in their communities, counties, and states, few express the aspects of the culture as much as school-building construction. With its roots deeply embedded in the past, the school building and its surroundings are symbols of a free, self-governing people. This was true of the rough log cabin that housed a meager educational program in the frontier community. It is equally true of the modern, well-planned school plant with its grounds filled with eager, inquiring students (Babcock, 1979).

### Review of Related Studies

A computer search of the ERIC files produced a helpful list of 87 documents dealing with all aspects of campus beautification. While little of this material relates specifically to Seventh-day Adventist academies and colleges, much of the material could be applied.

In a study conducted as early as the 1940s, Lohmann (1941) stressed that the symbols of intelligence, culture, and wholesome recreational activity in the community are the schools, and their surroundings should measure up more closely to their unique position. For the sake of each student who spends 13,000 impressionable hours in the campus setting, the grounds should bear the impress of maximum suitability, utilization, economy, and beauty.

Lohmann continued by stating the campus acreage needs to be adequate. Since recreational and other activities require more space, at least 15 acres should be allocated for a senior academy. Most of the space would be taken up by the sports fields with the running track as a principal feature and space within for football, field events, and softball. The senior academy recreational space needs to be oriented for the accommodation of spectators.

The school land should be selected not only as near as possible to central and accessible locations but in suitable environments that are free from noise, odors, distractions, and dangers of traffic; railroads, factories,

tall buildings, major thoroughfares, and airports. Properties most preferred are those close to parks and within desirable residential areas for the purpose of developing a beautiful campus in relation to the surrounding neighborhood.

Lewis and Haque (1988) stated that because very little exists to stimulate the student's active thinking process, most traditional school yards are considered obsolete. For a student to develop properly--physically, emotionally, socially, and intellectually, he/she should be exposed to stimulating environments that arouse interest. The idea of transforming a stale, boring campus into a stimulating learning environment for students is fascinating.

#### An American Landscape Architect

Balmori (1985) wrote about one of America's leading campus landscape architects, Beatrix Farrand. Farrand's working principles and landscape designs are best known at Princeton, where she worked from 1912-1943. Thanks to Farrand, Princeton has a particularly good mix of natural and designed settings, producing a feeling of settled calm. She gave the campus landscape a continuity and unity of purpose. She had a well-defined philosophy and a thorough approach to campus planning. Balmori said that under Farrand, Princeton became one of the best landscaped campuses in the United States.

At Yale (1922-1945), Farrand designed a major new Gothic complex, the Harkness Quadrangle, which consisted of three residential colleges surrounding inner courtyards. The Comptroller of Yale, Thomas Farnam, told Farrand, "I have enjoyed the garden more than ever this year and though perhaps it is a luxury, I have reached the stage where I consider it absolutely necessary to my comfort and welfare." During the Depression, due to a major budget cutback, the students were asked to help Farrand with the landscaping and were given scholarships for their part in the work.

At the University of Chicago (1929-1936), Farrand landscaped a campus where a master plan of 1891 had adopted a quadrangular layout and, again, the Gothic style was used allowing for variety within a unified whole. By the time she had finished her work at Chicago in 1936, the Gothic style was going out of fashion.

Farrand was responsible for major portions of landscape at several other colleges. At Oberlin College (1936-1946), she planned the landscape to intertwine with the village square, which doubled as the village and campus green, and developed it to include something from the campus and town character (Balmori, 1985).

#### The Need for Change

Unfortunately, such design was not evident everywhere in the United States, as can be shown, in a 1949

checklist for a healthful and safe school environment developed for California schools. In the list of more than one hundred items, only one concerned the care of the grounds. It stated: "The grounds should be free of refuse which attracts rodents and insects" (Hill, 1949, p. 123).

Roth (1958) pointed out that during the first part of the 20th century, neither architects nor educators had a clear understanding of the educational purpose of carefully planning school grounds. More often than not, the school was developed by outdated standards that did not provide for the beauty of the buildings or their surroundings.

Wilkinson (1978) found that one of the first Americans to recognize the need for properly planned facilities, including the area of campus beautification, was Henry Barnard, an associate of Horace Mann. He observed that Barnard was ahead of his day in his understanding of the importance of the setting and the need to design a school building situated in pleasing surroundings.

In their efforts to cope with the building of a school in the face of continuous financial crises, school administrators, school boards, and architects have often forgotten one of the important elements in the development and one of the basic needs of the growing student, and that is beauty (AASA, 1960a).

Lewis and Hague maintained that students are a nation's finest natural resource, and educators can pass on

a sense of value to students that they, in return, might continue this process. This sense of value is difficult to realize when hastily planned educational facilities and their surroundings are no more than fenced-in containers for students (Lewis & Hague, 1988).

They continued by saying the material needs of students, in most cases, have been adequately and thriftily met, but the emotional and spiritual needs have been undeveloped. It has been noted that the emotions generated by the physical environment have long been acknowledged to be of most importance in the design of schoolhouses, and therefore the administrator can develop a sense of beauty by providing an attractive and pleasing surrounding in which to live (AASA, 1960b).

In another study, Whitehead (1957) said: "The ultimate motive power, alike in science, in morality, and in religion, is the sense of value, the sense of importance. The most penetrating exhibition of this force is the sense of beauty, the aesthetic sense of realized perfection" (p. 76).

Brown (1983), an instructor of landscape design for Andrews University, suggested that education should be one of the most stimulating experiences in life, and intellectually it often is; but the grounds, except in rare instances, are far from stimulating. It is important to strive for a physical environment that satisfies the



student's emotional and material needs and stimulates spiritual growth. A student's ability to see and appreciate physical beauty is nurtured by his/her surroundings. In planning for campus beautification, the things that touch deep emotions and lend to satisfaction in stirring imagination and showing the things of lasting value are most important. Good schools have a capacity for attracting beauty unto themselves and then transmitting it into the lives of those who have been associated with them.

Brown continued by suggesting that students should have beauty in their lives to develop to their fullest potential. Beauty is one of the basic educational needs, and the school is an ideal setting for relaying this idea so students can be taught to understand and appreciate it. It is inconsistent to attempt to teach civic pride and full appreciation of the creative arts to students while denying them beautiful surroundings. If a person has not known beauty from experience and observation, he/she will not be able to create it. As certainly as beauty lies in the eyes of the beholder, it is much more beautiful if the beholder is the one responsible for its beauty.

Colbert and his associates (1957) conceived an ideal school for students and called it "An Educational Oasis" (p.16). A large wooded tract of land served as a protective screen to isolate the educational functions from the outside world. This campus became the student's world.

The buildings and site were developed as a single entity with each element relating to the other.

In addition to the classrooms in this ideal school, a biological garden, a water fountain, an animal enclosure, and a sculpture arbor all take their place. This school was envisioned as a gigantic teaching aid scaled to the interests of the students. In a sunken garden, the students had a chance to study nature as they planted and watched the day-to-day development of flower bulbs as they evolved into blossoms. Here, students could learn about cultivation and pollenization by observing the bees and insects among the flowers. Throughout history, such an ideal situation has been imagined as a means of stimulating creativity in the minds of students. Probably man's dreams always exceed his reach.

In reviewing the literature, it was observed that a wide diversity of practice is in use in the planning of schools. Some would have the architect plan the school according to his/her concept of what an educational institution should be; others insist upon a detailed set of educational specifications prepared jointly by the community and professional educators. In the latter case, the architect is to creatively translate the specifications into an architectural design (Babcock, 1979).

### A Site/Master Plan

According to the West Virginia Department of Education (1973), a master plan should be developed before any landscaping is done. The plan should consider the harmonious visual integration of the varied plantings with the mass of buildings from all points of view. In general, a school-ground planting scheme should consist of foundation planting, intersection planting of shrubs at angles and curves of drives and walks, tall trees to frame the buildings, and trees planted in groves for shade. The choice of plants should be limited to those varieties that require minimum maintenance, that are sturdy, that thrive in recreational areas, and that tolerate normal amounts of dry weather.

In another study supporting West Virginia Department of Education, Kerezst (1972) stated that a good master plan takes all factors into account and is flexible enough to allow change. One way to handle landscape design is to develop a master plan, set realistic goals, and establish budgets.

He continued by saying a professionally trained landscape architect may be needed, at least on a part-time basis, to help develop and keep current the campus master plan, prepare development plans, orientation of buildings, outdoor construction details, road and street alignments, and make grading plans. It is highly desirable to have a

master campus landscape plan. Full attention should be given to existing physical resources. Trees, streams, ponds, vistas, and other natural features all have great potential for beauty if they are carefully incorporated into the campus landscape master plan. It is here that the landscape architect can be of most help. His knowledge of natural features help in the planning.

Gould and Finci (1986) suggested that if a master plan had not been developed and the cost of developing one was too expensive, then a site plan should be developed. The site plan would be a first step in orderly development. The campus-wide site plan would consider the campus as a whole, study its relationship with the community, and address immediate and long-range potentials and problems. It would allow for writing a guide for future growth and change. It may not be followed to the letter, but at least it is a starting point. It is the beginning of formal planning and can lead to a formal master plan.

The study continued by noting that visual comfort and efficiency may be largely conditioned by the careful utilization of trees, plants, shrubs, and lawns, and the cost of operating is directly affected by these factors. A site plan for planting should be prepared by a competent landscape architect for school grounds before actual placement of the trees, shrubs, and plants begin. The site plan should include projections of the locations of

permanent features such as buildings, roads, walkways, parking lots, sculptures, memorial gardens, fountains, and playing fields. A site plan is also important for the location of trees, so they do not have to be moved at a later time. The site plan should include the location of subsurface utilities and give consideration to the practical aspects of maintaining all landscape features. After the plan has been adopted, all planting of trees, plants, lawns, and shrubs should proceed according to the plan in order to ensure consistent development.

The study continued by saying that when planting shrubs and flowers, the students should be taught the importance of design. Planting in a straight line is sometimes necessary but planting in a curved line adds beauty and symmetry to the campus.

Planting in harmony or discord, according to Lewis and Haque, (1988) will

be necessary to teach an understanding of the relationships when selecting and positioning plants. The size of the plant is important and balance of planting could be used as an example. If the school property is large enough and after the students have gotten some experience with landscaping an area away from the school that is still in the rough, a space can be given to them for their own creation. They can be given raw materials and encouraged to create their own environment. The idea is to have the students act as clients because in reality they are the clients. (pp. 221, 222)

Correspondingly, Lohmann (1941) said that for intelligent guidance, every educational institution should have a comprehensive master plan. The plan for a new

institution should have proposed locations for buildings, drives, paths, recreational areas, gardens, forest, and other plantings. The plan should be flexible to accommodate reasonable modifications as conditions and needs dictate. It should be broad enough to take into consideration the common problems of the community as well as the campus.

#### Elements of Landscaping

Pawsey (1982) suggested that by using landscaping elements and campus furniture, a blending of the campus can be achieved when there are several styles of buildings on the campus. Often, building styles change and more modern and perhaps less costly materials are used to create a mixture of building styles and discontinuity. The elements used to achieve continuity and harmony are such things as paving, planting, lighting, direction signs, seating, trash containers, and other landscaping elements. Usually, a campus is considered a pedestrian precinct with access for vehicles only for parking and service. Hence, all major pedestrian routes should be paved in one continuous type of material. This is true for the parking lots and drives as well.

When planting, it is usually better to utilize native plants. Deciduous trees can be used along walkways and roads and particularly around taller buildings to give continuity. Uniformity in campus furniture also helps to

create coherence throughout the campus. Signs made of the similar materials and painted with the same style lettering and color add to the harmony. Suitable recognition, according to relative importance, should be given the entrance to the campus and to each area.

Pawsey also said that campus properties may range from as little as 30 acres to several hundred acres. The quadrangle scheme of campus development has been around for a number of years and is still used, probably because it saves space, makes for ease of communication, and is architecturally effective.

McMullen (1984) stated that one area of landscaping is "hard landscaping." This includes the walks, drives, courtyards, and parking lots. Most of these are done by a contractor, but courtyards and walks could be done by the students. If a courtyard is desired in a certain area, students could prepare the soil and by using bricks, stones, chips, concrete, or slate, a large area could be developed into a courtyard.

He continued by saying shrubs constitute a large part of any landscape planting, and the number of available species and varieties is almost unlimited. Shrubs can be used for foundation plantings around buildings, as border plantings, and for screening from view objectionable objects. Shrubs should not be used near parking lots, because of the possibility of damage to them by vehicles

and in colder climates damage done by salt. Tall shrubs can be planted around the perimeter. Walks are best done in concrete, because of low maintenance, but if concrete is unaffordable, materials such as gravel, crushed stone, brick, asphalt, crushed shells, or bark could be used.

Walks and paths could be integrated into the campus landscape design to enhance rather than detract. Paths invite and are an important unifying element in the landscape design (Fairbrother, 1974).

Lohmann (1941) stated that walks should make it possible for people to reach the various parts of the campus comfortably and pleasurably. Walks that lead directly to the main buildings of the campus should be direct and landscaped in such a way that the eye of the visitor is greeted with beauty. Such things as a pool, fountain, or sculpture could be incorporated into the landscape in the entrance area.

The principle opportunities for planting are at the front of the campus, the outer boundaries of the property, and in special spaces throughout the campus. The area in front of the main buildings may be a simple lawn with a few well-placed large trees. As seen from the front, the buildings should be outlined by large, well-formed trees, and the buildings themselves should be seen against these trees.



As a point of symmetry, the approach to the main buildings is likely to need concentrated treatment involving formal plantings on each side, or less formal arrangements where the architecture is less balanced. Groups of plantings may need to be placed at corners or at set-backs of buildings. Trees with their foliage and shadows may be used to break up uninteresting wall spaces of the buildings.

Rubenstein (1969) suggested that although a straight line is the shortest distance between two points, it can be monotonous if aesthetic features are not considered. Walk alignment has two phases, horizontal and vertical. Curvature of this alignment gives an opportunity to fit a walk to natural topography while taking advantage of natural site features.

He continued by stating that a comfortable bench placed along the walk or pathway can be attractive and can be used effectively to stop the flow of traffic. Seats may be of wood or masonry, and could be built around trees or in patios, courtyards, or as a station at some vantage point for observing a view. Advanced planning is necessary for the location of these elements that can add so much to the landscape design.

Rubenstein (1969) also stated that where a bridge is required to cross a stream or depression, it should be designed to blend with and enhance the landscape. The

bridge should provide a station for a lovely view. Therefore, the area around the bridge should be attractive. In such a situation, students could work in or study the things of nature found in the stream. Wood and stone blend with any landscape and are excellent materials for small bridges, although metal bridges can be attractive too. Bridges should be planned in conjunction with the paths and walks.

He continued by suggesting that when planning for campus beautification, recreational considerations should fit into the landscape plan. Tennis courts, tracks, ballfields, and play-grounds can be a blight or a blessing in a landscape concept. Walking and hiking trails, picnic areas, nature-study and bird-watching areas with small lakes and a viewing stand could all be part of an informal park concept. Irregularities of the earth's surface are known as landforms, and one of the primary objectives which should be met by site grading is the positive run-off of water. The sloping of land may operate in opposite fashion as well, for depressions can be created which aid in water retention while providing an aesthetically pleasing and temperature-moderating pond or similar water feature.

Rubenstein concluded by saying water is perhaps the most important single item in maintaining a good lawn and complete landscape. The important thing about water is to

have it when and where it is needed. For best and most dependable results, a sprinkler system is needed.

Such a feature, according to Evans (1988), is necessary for those campuses that are subject to drought. The use of water from the ponds for irrigation is a must for green lawns in areas that do not receive adequate rain fall year round. Even then, it is essential to plant grass and plants which require little water. "Xeroscaping" is the practice of using plants with extremely low water requirements, and those are usually native to the area in which they are tended. Native plant material can survive extremes in weather better than material that have been imported. Wild flowers can also be used in areas subject to drought, because they are not as sensitive to drought or other severe conditions. Flowers give a finishing touch to the landscape and do much to brighten and enrich any planting. They should be used to complement the landscape.

### Trees

McQuade (1958) stated that trees are an important element in the landscape. Even if the climate is hot and sunshiny, properly placed trees help to stop the sun's rays before they over heat the classrooms. On the other hand, an improperly placed tree in cold climates could make the classroom dark and cold. The best placement of trees depends upon geographical location. Trees can be used as

windbreaks to protect the school, in fact, trees can diminish wind velocity as much as 80%.

Fairbrother (1974) agreed with McQuade by stating that trees can fill voids on the campus as no other material can. There is no better form or unifying element than a tree. Most trees are beautiful and provide comfort and add aesthetics. Trees prevent erosion by slowing and directing wind and water with their trunks and holding on to soil with their roots. Caution should be taken with such things as sewer lines, electric lines, gas lines, and possibly cross-country gas or oil lines passing through the campus, as well as irrigation lines and drains which would dictate where trees should be planted.

Brewster (1976) agreed by stating that trees come in all sizes and shapes and are the most spectacular part of the campus landscape. Some are tall and slender; some are as wide as they are tall; some lose their leaves in the winter, while others do not; some are best used for shade, while others are best used as accent. Good lawns and healthy trees are a good combination.

Taylor (1958) pointed out that if there are trees already on the school site, they should be left unless they are a safety hazard. If new trees are to be planted, the trees selected should be those that will serve best in the school's location.

### Gardens

Taylor (1958) continued by saying educators have long believed that the more direct and purposeful one's experiences are, the more probable it is that learning will take place. Realizing that all knowledge is not gained within the four walls of the school building, much of today's school program in many areas is carried on outside the school building when the weather is suitable. School grounds and adjacent areas, therefore, become outdoor classrooms for learning experiences in gardening and other subjects.

A practical arts curriculum workshop for the Southern Union Conference of Seventh-day Adventists (1982) stated that there are basically two kinds of gardens. One is developed for aesthetic value and could enhance the beauty of the campus. A beautiful, well-placed flower garden near the walkways or a waterfall could create a beautiful place for study and meditation. With the students' help, a flower garden could become a reality for most schools.

The other type of garden is one that produces food for consumption and is usually placed to the side or back of the school grounds. Many valuable lessons could be learned from either of these two types of gardens. Teachers and students benefit socially when working together. In either of these two types of gardens, planning and supervision by the teacher is essential. Other benefits gained from

working outside are the exercise and working in the open air that is much better for health than indoor work.

Along this same train of thought, White (1903) stated:

Work in the garden and field will be an agreeable change from the wearisome routine of abstract lessons, to which young minds should never be confined. To the nervous child, who finds lessons from books exhausting and hard to remember, it will be especially valuable. There is health and happiness for him in the study of nature; and the impressions made will not fade out of his mind; for they will be associated with objects that are continually before his eyes. (p. 76)

As a part of the landscape design, some schools could develop extensive gardening programs. These gardens could be both beautiful and beneficial. Others, because of urban locations, could have a small garden or even an indoor garden.

The Southern Union workshop (1982) developed the following objectives for planning a garden:

1. To develop in the student a recognition of the importance of work
2. To learn from nature
3. To develop an appreciation for beauty
4. To awaken an interest in beautifying school grounds
5. To appreciate the health benefits that come from working with the soil
6. To develop a campus atmosphere that attracts students away from the sins of this world
7. To learn the organization of time
8. To encourage a missionary spirit. (p. 9)

Young (1977) summed up the value of gardening thus: "Activity and work experiences, now recognized as fundamental in learning, can be provided through gardening more readily and inexpensively than almost any other way" (p. 87). Besides adding to the beauty of the campus, gardening provides motivation for learning in almost the whole range of school subjects, and it does more to help children and youth learn. The very foundations of health are found in gardening. Fresh air, sunshine, and food rich in minerals, vitamins, and fibre are part of the activity. Contact with the soil and growing plants has long been recognized as a developer of patience, perseverance, modesty, and reverence. Combined with group activity in a school-sponsored program, gardening adds responsibility, honesty, cooperation, punctuality, and consideration of others.

Color should be considered as a concept in campus beautification, whether it is in vegetation, view, or buildings. Color brings the world to life and makes it real, positive, lively, and exhilarating (Eckbo, 1969).

#### Site Lighting

Hammer (1988) suggested that another area of campus beautification should receive attention, and that is site lighting. Hammer stated that the primary function of site lighting is to provide nighttime safety and security in all areas. Even levels of illumination are preferable to a

series of bright spots. In addition to providing safety and security, lighting can be used to enhance the beauty of the campus. Outdoor lighting can add tremendously to the atmosphere of the campus. Low lighting can direct one's attention to the walkways and grounds, creating a consistency throughout the campus.

Brewster (1976) observed that every school and college has an atmosphere, a quality of personality that makes a lasting impression on students, teachers, employees, and visitors. He continued by saying, "There is in landscape design a potential enlargement of educational processes which have rarely been explained." The grounds tie all the physical development together and make the entire school plant a more attractive, livable, and harmonious whole. The area around the buildings on the campus should compliment the structures and aid the academic processes.

Lohmann (1941) stated that campus beautification results from a well-conceived use of lawns, trees, and other vegetation. An attempt should be made to secure a maximum of impressiveness with plantings so that the results create a tranquil, comfortable, pleasing campus in perspective with the institution. Open views of the quadrangle may be enhanced with mature native trees. Small-scale plantings should be confined to the more intimate parts of the interior campus. Buildings should not be covered with vines to obscure their surfaces.



Instead, vines may be used over the doors to produce a restrained and well-directed silhouette.

Kilpatrick (1973) observed that plants and trees generally used on school grounds are shade trees, ornamental trees, coniferous evergreens, broadleafed evergreen shrubs, deciduous flowering shrubs, vines, and ground-covering plants, and these should be planted in an informal manner. Shrubs, especially the flowering varieties, enhance school grounds. Tall-growing shrubbery should not be placed under windows, because neglect of pruning may result in poor classroom lighting conditions. Trees should not be located too close to the building for this may create light problems for classrooms and roof drainage problems. Perennial vines are desirable on fence rows and blank walls in order to hide unattractive objects.

#### The Importance of Appearance

In a study conducted by the Carnegie Foundation (1986), students were asked what influenced them most about a college and why they chose a certain college. The students said that a visit to the campus gave them a feeling for the institution, and 62% of the students responded by saying they chose the college because of the appearance of the grounds and buildings.

In a study prepared by State University of New York (1988), Ernest L. Boyer made the statement, "The appearance of the campus is, by far, the most influential

characteristic during campus visits, and we gained the distinct impression that when it comes to recruiting students, the director of buildings and grounds may be more important than the academic dean." The campus is an image-a symbol. It is tradition and history representing the purpose and philosophy of an institution. The campus rouses pride, loyalty, and attachment. It inspires memory and continuity, sense of place, recreation and, most of all, education. The campus is also important to the occasional visitor and to the recruiter who uses its image to instill respect for the institution.

In a similar study, DiGeronimo and Gustafson (1985) expressed that the appearance of the campus is one key to better enrollment. An attractive, well-landscaped campus can have a positive effect on the students and parents when they first visit the school and, thereby can increase enrollment. If students and faculty are in an environment that is attractive and comfortable, vandalism is lessened, and the people of the community have a sense of pride in the school. When students and staff are proud of the grounds, they feel better about attending classes. The campus can become the pride of the community and be a showcase proclaiming the value the community places on education.

In a related study, Vircan (1984) noted that first impressions do count. The first things seen by visitors

and prospective students are the campus grounds. The campus grounds should make a statement about the goals of the institution. The grounds should be functional and provide a smooth pedestrian and vehicular traffic flow. The grounds should be appealing, creating a pleasing environment for all.

The study by State University of New York (1988) reported that a well-designed campus is of vital interest to the administrators who shoulder the ultimate responsibility for the image, reputation, and fiscal health of the campus. The college administrator must contend with the tangible realities of sustaining, planning, designing, and financing dozens of buildings, hundreds of acres of land, thousands of students, faculty, staff, and other administrators, each requiring space for work, recreation, living, and a place to park. This creates a challenge to provide a sense of community on campus and establishing a campus design for individuals bonded by the common pursuit of knowledge into a community in a shared landscape. The campus should make the statement--this is a place where learning is revered.

In the same study, it was noted that the campus is not the space that is left over after the buildings are built; it is, in fact, a series of designed places which reflect the way in which an academy or college wants to be perceived. Therefore, the campus should be a place that

stimulates, enhances, and appeals to the students, faculty, and others involved in the thought processes necessary to achieve higher education. The campus creates a setting for the institution upon which its image is ultimately derived. The character of the landscape serves more than an aesthetically pleasing element, it forms a positive image and setting for the institution.

The report continued by stating that American campuses have been located in urban, suburban, and rural communities, sometimes as places apart where they can serve as islands of serenity without the distractions of society, and sometimes as integral parts of communities so that educational and practical concerns might be shared. However rural a host community might be, the campus plays a major role in determining the quality of the local physical environment. The nature and extent of a campus's visual impact on the community are, in part, products of how the institution views itself, that is, the ways in which the physical arrangement of the campus reflect the purposes, traditions, and history of the institution. Thus a campus's contribution to the local landscape may be such distinctive images as buildings grouped on a hill; a broad meadow with mature shade trees on the edge of a lake, or a chapel with chimes that play to the community each day. The campus may provide a park for a natural environment as a monument to caring friends and alumni.

The study continued by stating that the campuses that were once viewed as adequate with a few academic buildings around a quadrangle now have scores of acres devoted to intramural sports and acres of recreational trails along streams and ponds. These elements are often presented in the catalogs and recruitment literature because they are the aspects of campus life which are the most symbolic and memorable, as well as the most marketable. Many institutions try to establish lifelong relationship with its alumni in order to enjoy long-term financial support. If students can enjoy a campus that reflects beauty and these images are kept as part of the memorable experience, then the institution will reap the benefits. Those images--pride, nostalgia, and, maybe, a sense of longing--are often used to attract financial support for the campus. Therefore, it is important to preserve the major images within the campus landscape. The integrity of the original quadrangle should never be compromised. The woods with the nature trails should not be cut down to accommodate overflow parking. The alumni look for positive change on campus, but they want to be able to identify with the campus they once knew.

This report prepared by State University of New York (1988) concluded by stating that the traditional campus once served as a setting in which educational processes could take place. Because today's campus serves such a

broad constituency, it has the opportunity to expand its role to become, in itself, instructive. Trees, shrubs, hedges, and flowers of the campus might all be tagged so that the entire campus becomes an arboretum. These elements could be so strong that they play a more important role than the buildings themselves in defining the image of the campus. The campus, therefore, provides a unique sense of place, security, and orientation. As such, it should receive the same benefits of short- and long-term planning as any other integral component of collegiate life. Moreover, such planning should be viewed as a regular part of the institution's administrative processes.

Tonigan (1964) observed that attractive school grounds enhance opportunities for general cultural development and tend to create pride in the school and the community. The effort and care expended in designing a pleasing building is largely nullified unless similar attention is given to the development of an attractive and useful setting. The cost of school ground development should be included in the initial capital outlay budget.

#### Historical Development of Campus Beautification Within the Seventh-day Adventist Church

The Seventh-day Adventist Church has had significant knowledge in the area of beautification. The first school was created in the Garden of Eden. The Garden was the classroom, Nature was the text book, God was the Teacher,

and Adam and Eve were the first students (Gonzales, 1989).

Since the organization of the church in 1844, its members have studied the Bible and used it as a source of guidance. The members of the Seventh-day Adventist Church believe in creation and believe that everything was created in six literal days. They believe the educational system created by God since the beginning was to be a model for schools.

Nature provided them with countless lessons. They learned valuable instruction from the leaves, the trees, the animals, the sky, and the mountains. Man's first classroom was beautiful. The changed condition of the earth, through the curse of sin, brought a change in the manner of dealing with landscape. Even though landscaping is hard and wearisome, it is still a source of happiness and development (White, 1903).

Through the writings of White, one of the founders and leaders of the early Seventh-day Adventist Church, comes recommendations that can be applied to the campus setting.

White communicated that the original classroom designed by God Himself included communion with heavenly beings (Gen 3:8), practical work (Gen 2:15), and the study of nature (Gen 2:16).

White (1923) gave the following word picture:

God prepared for Adam and Eve a beautiful garden. He provided for them everything that their wants required. He planted for them fruit-bearing trees of every variety. With a liberal hand He surrounded them with

His bounties, the trees for usefulness and beauty, and the lovely flowers, which sprung up spontaneously, and flourished in rich profusion around them, were to know nothing of decay. Adam and Even were rich indeed. They possessed Eden. Adam was lord in his beautiful domain. None can question the fact that he was rich. But God knew that Adam could not be happy unless he had employment. Therefore He gave him something to do; he was to dress the garden. (Fundamentals of Christian Education, p. 38)

In another book, White (1903) stated:

Those with whom mental and physical well-being is of greater moment than money or the claims and customs of society, should seek for their children the benefit of nature's teaching, and recreation amidst her surroundings. It would be a great aid in educational work could every school be so situated as to afford the pupils land for cultivation, and access to the fields and woods. (Education, pp. 211, 212)

Man's first classroom was beautiful--filled with flowers, shrubs, and tress, along with well-kept lawns. Seventh-day Adventist schools should duplicate, as far as possible, the beauty of that original classroom. At Avondale, Ellen White (1900) suggested that even the road approaching the school should be "beautiful with fragrant flowers and ornamental trees" (Testimonies, 6:187). The grounds themselves were to be equally beautiful. Today's classroom should reflect, as much as possible, the original classroom and include space for communion with God, practical work, and nature study. All of these may be achieved by involving the students in the plan of campus beautification.

In 1903, White wrote about the importance of students working outside in the area of nature. In her writings,



she suggested that students need the blessings which they may receive from caring for growing things. She also suggested that students need to see the relationship between cause and effect and that they need the practical skills that caring for plants involves. Even though White's study was not specifically on campus beautification, many aspects of her work can be applied to this study.

In the booklet Learners Live Here (1977), published by the Education Department of the General Conference of Seventh-day Adventists, it was suggested that the outdoor spaces should be more jealously protected from encroachment of the flow of asphalt and cement. Especially where the climate allows, outdoor provisions should be made for study as well as physical education. These class spaces should have doors opening directly to the outdoors. It is recommended that courtyards between wings of the school receive more attention in planning and use. Outdoor spaces should function more often as teaching-learning areas. Attractive exterior treatment of the spaces around the school has great value in promoting student and community pride.

In some Adventist academies, an elementary school with a kindergarten may be attached. If so, there should be a kindergarten yard. This yard (minimum of 4,000 sq. ft.) would provide space for the variety of outdoor activities

essential to good kindergarten programs and should be visible from the classroom. This area should contain both turf and hard surface space.

The Southern Union workshop (1982) on campus beautification and school gardening was based on research of literature and developed a very practical form which could be used by many schools. The committee members searched literature for supporting material which would show the importance of campus beautification and school gardening. They also brought in the spiritual value and character-building traits associated with working outside. The study was developed into a curriculum guide designed to integrate a larger use of nature study, soil cultivation, and campus beauty into the Adventist school system.

Gonzales (1989) wrote a paper concerning landscaping, and even though this is only one part of campus beautification, his paper was helpful and similar in many ways to this one. Gonzales implied that in modern times, landscaping includes all that the eye can see, the land and all the objects on it, both natural and man made: the soil, grass, trees, rocks, water, and even the sky. The paper written by Gonzales was mainly concerned with Seventh-day Adventist schools and the importance of creating an adequate environment for education.

Seventh-day Adventist believe the Bible should be the first book used in education, and the study of nature, the

second. By involving the students in the study of nature, it is believed that a Christ-like character can be developed and that students can develop common sense. In landscaping, students learn to plan, to execute, to persevere, and to use tact and skill. The Adventist educational system has much information to help in integrating a large use of nature study, soil cultivation, and campus beauty into their school system (White, 1903).

#### Administrator's Responsibility

Streeter (1977) noted that the educational administrator, "as professional leader and executive officer of the board of education, is responsible for school plant development." This includes not only the buildings but also the grounds. (p. 24)

In order for this to become a reality, a specific plan has to be in mind. The responsibility of this plan is with the administration. At the academy level, the responsibility lies primarily with the principal and the board. At the college level, this responsibility may be shared by a committee chaired by the president. If campus beautification is to take place, there must be a desire for it and a willingness on the part of the principal or president and the teachers. If they are not willing to put forth the effort in word and deed, it will not happen. The first step in planning for campus beautification is to have a plan. The principal or president should head a committee

to develop a plan for campus beautification. During the planning stage, as far as possible, every aspect of the desired outcome should be discussed (AASA, 1951).

Administrators cannot expect students coming from unattractive school surroundings to be able as adults to assume civic responsibility, to participate in cultural undertakings, and to recognize the finer attributes of a civilized society. Students can learn this by being included in the learning experiences of campus beautification according to Lewis and Haque (1988).

They continued by saying that the administration and school-board members may not be readily aware of the benefits to be derived from a visionary approach, but the school system that seeks to move beyond the commonplace in function, form, beauty, and design of its school facilities will not overlook the limitless resources of the human imagination.

Lewis and Haque continued by saying educators are often limited in imagining schools as they might be by their knowledge of what they are. Too often educators are actually afraid to visualize the kind of environment they think appropriate. When educators are hampered by what "is," it is difficult to see what "might be."

Although the Council of Educational Facility Planners International (1976) indicated that the educational administrator was a primary agent for facility planning,

lack of definite statements of his/her responsibility still raised some questions, even in the 1970s.

In a related study, Brewster (1976) stated that university and college administrators should be the first to recognize the importance of properly planned, developed, and maintained campus grounds. However, good outdoor "housekeeping" is lacking at far too many campuses. On many campuses, buildings, walks, streets, and parking lots have replaced trees and open lawn areas. Administrators are very much aware of their public image and far more people see the grounds of an academy or college than ever see the inside of their buildings.

The study continued by noting that in the planning of schools, the administrator should consider that attractive landscaping and grounds maintenance contribute to safe, pleasant, functional outdoor environment and increase the respect shown the institution by students, staff, and the public.

It was suggested in this study that it is the responsibility of the teachers to educate students in ways to incorporate indoor classrooms into outdoor environments, but that it is the responsibility of the administrator to provide the opportunity.

#### Possible Achievement of Campus Beautification

One approach to campus beautification is for the principal to do it, but there are several problems with

this approach in an academy setting. First of all, the task is too large for one person. It would be a rare case for the principal to have the time, energy, and/or ability to accomplish the task. And, with this approach, while the parents, other teachers, and students may enjoy the beauty, they will not have the desire to maintain that beauty since they are not or were not involved (Turner, 1984).

Turner added that if only one person did find the time and energy to do the initial beatification, he/she would find it most difficult to maintain. This approach of singular concern does not seem to be well planned, especially in the long run. When one such administrator transfers to another school, and since he/she was the only one involved, the program would probably disintegrate.

McQuade (1958) suggested another approach that seems to be more reasonable, and that is to involve the community. To involve the community, the principal or president, under the direction of the board, would organize a committee to assess the feasibility of involving the community. The community members would be organized in such a way as to put their talents to the best use. Care should be given concerning overworking of community members, especially if the work is volunteered. If there are members with talents in the area of landscaping and if they have special equipment, pay should be offered for their

labor, especially for the operation and maintenance of equipment.

Green (1983) observed that the involvement of the community in a campus beautification program is a most rewarding program. It strengthens the relationship between the administration, faculty, staff, and community. The community can be involved in specific projects, such as: creating an outdoor courtyard--complete with benches, picnic tables, bird feeders, and landscaping. It is important to lay the ground work for such a project before actual work begins. Careful attention to detail is important before the plan is put into action. This approach has been used with varied results. If the planning is not done properly and carefully by the administration and board, many problems arise. If poor communication between the administration and community members develops, the project may be jeopardized. This approach is successful in some instances for the initial campus beautification project, but in some cases fails due to lack of maintenance, once the project is finished.

Green continued by pointing out that the potential for developing environmental education facilities within a school is limited only by the boundaries of one's imagination, resourcefulness, and enthusiasm. He suggested that the school community can often help with projects that include campus beautification if the work is well planned

and the results are clearly seen as a marked improvement. The aim of campus beautification should be that it makes all experience more vividly the natural scenery of the region--that it intensifies everyone's consciousness of the local environment.

Figlio (1980) recommended the involvement of the community in planning for campus beautification. Improving the image of a campus for its visitors and students can be enhanced by suggestions from the local community. Creating an oasis of green in a concrete environment requires lush plantings to make up for a lack of expanse, and keeping in mind the scale and need of orientation to the surrounding community. Aesthetic harmony can be accomplished with the simplest of elements: trees, flowers, grass, and stone. Plantings can be used as living sculptures, designed to create a mood, accent a building, or point the way without competing for attention. An image that is inviting to visitors and students is a source of pride for the community.

The U.S. Department of Agriculture (1972) suggested a more practical approach to campus beautification which involves the administration, the community, the school board, the teachers, and the students. After the desire and willingness has reached a point of action, the principal or president, in consultation with the board, can develop a definite plan with long- and short-term goals



clearly stated. With the support of the community and the board, a work-study program could be developed to include the students. Before beginning a project similar to this, it would be necessary to send out questionnaires to the students and to the parents to get their reaction and to learn if there is enough support for this approach. By involving the students in such a program, desirable outcomes may be achieved. This approach takes longer to realize, but it can become part of the curriculum and last through the years. One of the first things that can be done is in the area of landscaping. If the school is new or the land was not landscaped properly when the school was built, the students can help. By setting aside one hour a day, considerable landscaping can be accomplished, and with the involvement of the teachers and students, an adequate environment can be created. This gives the opportunity for the students to be brought in close contact with nature and learn practical lessons that textbooks alone cannot provide.

The study continued by suggesting that an outdoor classroom supplements and stimulates the environmental conservation-education program in a school. As a place for creative learning experiences, it gives depth, meaning, and new dimensions to generalizations about and understanding of humans' relation to their environment. In an outdoor classroom, students can learn directly from the natural

environment as well as about it. As an integral part of developing the campus site, an outdoor classroom could provide learning first hand about erosion, planting, and taking care of the soil, plants, shrubs, and trees.

The Southern Union Conference workshop (1982) agreed that a combination of administration, community, faculty, and student involvement was the best approach. For the initial work of landscaping and campus beautification, the community should be involved with the teachers and students. When the major portion of the project is in place, the teachers and students should organize a program to develop small areas into gardens, walkways, and courtyards.

It is easy to overlook the most obvious and most easily accessible facilities in favor of the expensive and remote places which sometimes prove to be impractical for educational use. Every student has a school building, and every school building has its own grounds. These schools and grounds offer the most accessible facilities for environmental education and provide the richest untapped environmental education resource (EFL, 1972).

The function of campus beautification is to establish the best possible relations between people and the world around them. Therefore, campus beautification can be accomplished by using the resources of the community and the school. The students can be taught, in an outdoor

classroom, how to care for the environment and at the same time direct their energy into developing the landscape.

Simonds (1961) noted that if there is extensive earth moving, or tree cutting to be done, it would be better to use hired labor for this or get someone from the community to do it. Care should be taken for the safety of the students and labor laws must be met. After the heavy work has been done by machine, the teachers can organize the students to smooth the topsoil and plant grass. Lessons in soil erosion can be taught at this time when the soil is soft. Methods of controlling soil erosion can be put into practice. The students should use their imaginations to develop special areas that can be used to plant flowers, put in walkways, plant trees and shrubs, or to develop gardens.

Boot (1983) stated that after the grass has been planted, other areas could be worked on. If the school is large enough, each class can be assigned a special area. One area could be planted with low shrubs and flowers close to the building. It all depends upon the geographical location of the school as to what type of shrubs and flowers should be planted. These shrubs and flowers may come from donations or from someone's home, or, if there are funds available, they may be purchased.

Gibbs (1988) stated that there are certain steps which should be followed in the implementation of the design.

The first step was to look at the present situation and then evaluate the future. What is the outcome going to be? Will the plan be for five years or longer? Plan with a committee what the long range goals are. Select inexpensive plant materials which are available and will survive. Select plantings which have the desired color, which provides shade, and are easy to care for. One key design principle is unity. Unity is the concept that makes the difference between an organized plan and one that is not. Unity of shape, color, texture, and theme should be considered. Balance is necessary to create the desired quality. Whether planting formal or informal balance is necessary. A landscape is a piece of living art and should have balance. Proportion of size should be considered in the design concept. The relative size of the existing features should blend with every feature added. Variety is another step in planning the design and should be carefully incorporated into the landscape design. It is better to plan simply and develop the variety slowly.

Booth (1983) stressed the need of using a logical process when planning. After the administration has formed a committee to develop the campus there are several parts which should be considered. One of the first considerations in the evolution of the design is the landform because it influences the aesthetic nature of spaces and spatial perception. Another element to consider

in the planning is plant material. Plant materials should be studied early in the design process as a part of the landform. Buildings are to be considered a major element in the landscape. In groups, buildings are able to create outdoor spaces that vary from a small courtyard to a large quadrangle. Pavement can provide an exterior space which fulfills both aesthetics and utilitarian function.

Whatever pavement material is used, it should be coordinated with the other elements of the design.

Benches, steps, ramps, walls, and fences subdivide areas and give detail. The careful use of these site structures makes the landscape more liveable and sensitive to human needs. Water is an extremely important factor in the design concept. It can be used in a variety of ways and is essential to the life of the plants, lawns, trees, and shrubs. The design process is a complex undertaking and the process is a framework of steps. The design process should be used as a tool that can be modified as needed to meet the needs of the campus.

#### Cost

Green (1968) pointed out that colleges and universities are being tested more than ever today by a changing environment which is necessitating optimum results in the use of restricted resources available. Green continued by stating that colleges and universities have historically functioned without cost-control methods.

However, sound ethics of management and cost accounting have a direct effect on administrators' expertise in obtaining funds and justifying disbursement of available funds. With the increasing scarcity of funds for higher education, institutions must be able to demonstrate their ability to obtain maximum benefits from available resources.

Kilpatrick (1973) stated that management and maintenance costs for a particular landscape design should be estimated by the planners. An informal garden concept and the natural habitat would be least expensive in most respects. These concepts influence the amount of hand work required, the amount of equipment required, the size of the grounds department, and the costs of expendables such as fertilizers, spray, etc. Trees can be messy, lawns need continual mowing, and the very arrangement of these elements can make maintenance difficult and time consuming.

Elements such as benches, tables, bicycle parking, fences, walls, ponds, and small lakes, types of ground cover, clearing around trees and shrubs, diseases and insects affecting plants, and even falling tree leaves should be given consideration to keep management and maintenance costs to a minimum while developing the site for a pleasant landscape. Where money shortages exist, beautification can still become a reality as a

comprehensive plan which permits the work to be done progressively over a period of time.

Lohmann (1941) declared that each campus should be surveyed on the basis of its own needs, and therefore will have its own peculiar program of cost. The cost of campus beautification development varies from 1-4% of the amount spent on the buildings. The expense for maintenance also must be kept in mind in the design of the campus. This too varies considerably with the amount to be done in care of grounds, trimming, spraying, fertilizing, cultivating, seasonal planting, and replacements. The problem of maintenance cost suggested the need of planting rather simply, of using plant materials that require comparatively little care, avoiding excessive ornamentation planting, using labor-saving devices, and systematizing maintenance.

Tonigan (1964) suggested a comprehensive plan that includes the financial aspect for the implementing of the landscape design which would permit the work to be done progressively over a period of years. If all the planting cannot be done at one time, the planting of grass and trees should be given first priority over shrubs and flowers. Grass suitable for the soil and climate should be grown on all areas not to be used for agricultural plots except for natural areas that may be located on the campus.

Brickman (1983) noted that if it is necessary to reduce the budget for campus beautification, careful

planning is important. He found that one way to cut expenses is to stagger landscaping tasks and spread them out over a longer period of time. By doing this, the key tasks are taken care of and major replacements can be avoided. If preserving quality and keeping down cost are indicated, careful planning can keep a campus landscape looking attractive with a minimum of expense.

Brickman (1982) expressed the importance of including in the landscape design a low-cost, low maintenance approach to campus beautification. Often, it required high initial expenses, but in the long run, it proved to be less expensive than an initial low-cost design. Contours should be graded so that the slope is not greater than 3 to 1. If the slope is greater, mowing and maintaining is difficult and increases the cost. An informal design is less expensive than a formal design and cuts maintenance cost. Non-plant materials, such as wood, gravel, brick, and concrete can play an important part in keeping the cost low. These materials can be used for low maintenance areas if they are used where plant materials are not wanted.

Conner (1986), who was in charge of the grounds for Georgia Tech, stated that the goal of his crew was to create beauty on the campus that is appropriate to higher education. He noted that it is important to develop a quality program for good landscaping as early as possible for the campus, because funds for such projects are often



hard to find. To reduce costs, he designed the landscape and constructed all of the elements that go into the beautification of a campus. He continued by saying that when the administration is convinced of the importance of campus beautification, plans can be developed for funds to be allocated for an endowment that provides funds over a long period of time, which is necessary to develop the quality desired. The campus should be a center of usefulness and beauty. It should be an attribute to the community in which it appears. It should be logical in placement and pleasantly located. Plantings should be useful for shade, enclosures, and beauty, and the development should be in keeping with the financial status of the community, both in cost and maintenance.

#### Summary

The purpose of this chapter was to review relevant literature concerning campus beautification. As students, community members, teachers, landscape architects, administrators, and board members work together a beautiful campus is possible.

A school with an attractive campus appeals to students and parents alike. It also increases the value of the property and of adjacent properties. Other students will see the pride of the students in their school and will want to come there, too.

## CHAPTER III

### METHODOLOGY

#### Introduction

The purpose of this study was to consider various ways to enhance the beauty of a campus, specifically, the beautification of campuses of Seventh-day Adventist academies and colleges, and then to develop guidelines for campus beautification. This study is descriptive and involves a review of literature and research which establishes the need for defining specifically the importance of a well-landscaped campus. A further review of literature and a comprehensive survey of all fifty states in the United States, plus various professional organizations, provided the basis for identifying the essential elements involved in campus beautification, describes how beautification can be achieved, suggest whose responsibility it is, and notes the expenses involved.

Through a review of literature and a survey of facilities, together with the expressed values of the principals of SDA academies and presidents of SDA colleges, the basis for such guidelines may be established.

This chapter describes the procedures that were used in the development of the guidelines. Particular activities to be described are:

1. The preparation of the guidelines from various sources;
2. The gathering of the necessary data;
3. The synthesizing of the data;
4. The organization of the guidelines;
5. The evaluation of the guidelines.
6. The validation of the guidelines.

#### The Preparation of the Guidelines

The guidelines were prepared based on information received from review of literature, various associations, educational superintendents from the fifty states, and the chairs of landscape architecture departments from Western Michigan University, Michigan State University, and Notre Dame University. In addition, when in preparation the guidelines for this study received input from each member of the dissertation committee and various other professors of landscape design from Andrews University. The following steps were used to synthesize the preparation of the guidelines.

#### Gathering of the Data

Data were gathered from superintendents of the fifty U.S. states that had published guidelines in the public

school systems for requirements or regulations specifically concerning campus beautification. Material was also secured from professional associations that were concerned with campus beautification. Visits were made to several Universities to glean suggestions from their landscape architecture departments as part of the data gathering. Data were also gathered from review of literature and research.

#### Synthesizing the Data

Data that were gathered are displayed in narrative and tabular form in chapter 4. Additional narration is included on the significant elements that are essential in all requirements. Data are also displayed in matrix form. A matrix was developed listing the states of the United States in the heading and a list of features that may be found in campus beautification down the sheet at the left. Tabulation of these features is conducted for each state which had some type of campus beautification requirement, and an analysis resulted from these findings. Finally, a list of essential elements was determined after reviewing literature and analyzing the requirements from the states and associations.

#### Organization of the Guidelines

The guidelines were organized in such a way as to reflect the steps necessary in the planning of campus

beautification. The guidelines had seven major sections, each with four possible responses--"no value," low value," "moderate value," and "high value." The first section was related to design concept. The second section was concerned with the atmosphere and environment. The third section concentrated on the aesthetics of the campus. The fourth section dealt with the framework required to develop a beautiful campus. The fifth was based on the importance of landscaping. The sixth section focused on the responsibility for providing a well-landscaped campus, and the last dealt with the expense and maintenance needed for campus beautification. The form of the guidelines used appears as Appendix A.

#### Evaluation of the Guidelines

One hundred five copies of the guidelines, together with a cover letter, and a stamped, self-addressed envelope, were mailed to the principals of SDA academies and presidents of SDA colleges in North America. The principals and presidents were asked to evaluate the guidelines and make value judgements on each item in the guidelines. They were also asked to make any comments about the wording and make other suggestions that might be beneficial.

### Validation of the Guidelines

After the responses were received from the principals and presidents, they, along with a cover letter, were sent to a panel of judges for validation. (The list of judges is found in Appendix E). This panel of judges was composed of professional educational directors in each union within the Seventh-day Adventist school system in North America. Judges were asked to validate the proposed guidelines as they related to the needs of Seventh-day Adventist academies and colleges. Further, the judges were requested to comment on strengths and weaknesses of the guidelines and to appraise critically in writing the proposed campus beautification guidelines as a useful tool in the designing and development of SDA campuses. The guidelines received from the judges were modified on the basis of their responses. The results of the study is presented in Chapter 4.

### Summary

The purpose of chapter 3 was to describe the procedures used in the development of the campus beautification guidelines. The specific activities described were:

1. Preparation of the guidelines
2. Gathering of the data
3. Synthesizing the data
4. Organization of the guidelines

5. Evaluation of the guidelines

6. Validation of the guidelines.

The tabulation and analysis of data are reported in  
Chapter 4.

## CHAPTER IV

### ANALYSIS OF DATA ON CAMPUS BEAUTIFICATION GUIDELINES

#### State by State Guidelines

The purpose of this chapter was to analyze the data collected from the 50 states and various professional organizations related to campus beautification guidelines. The information was obtained from guidelines produced by each state to help in the planning and construction of schools within the state.

Tables 1-33 outline the data from the 50 states that had published guidelines. A table for each of the 33 states that had campus beautification guidelines appear in alphabetical order by state. The states had basically the same requirements for campus beautification, but several did have some requirements that were unique to their geographical location.

#### Alabama

The state of Alabama (1975) recommended that the campus should be considered as a complete unit including the total developed and undeveloped acreage serving the institution. This includes areas occupied by drives,



walks, parking facilities and other improvements to the campus. By providing the space and setting for the institution, it becomes a crucial aspect of the environment. It is often the focal point of the community and a mark of the effort of the people in the community. An ideal school site creates an environment in which educational goals and objectives can be achieved. The campus is an integral part of the educational plan and one of the basic tools in the educational process. Table 1 reflects the guidelines of the Alabama school system.

#### Alaska

The state of Alaska had several guidelines (1978) for the beautification of the school campus and, due to the geographical location, many of these guidelines had to do with extreme weather conditions. The guidelines focused on three main categories: (1) social and land use factors, (2) cost factors, and (3) operation and maintenance factors.

Alaska's Department of Education was concerned with the aesthetic value of each site and stressed the importance of each district developing the site to its potential. When a new site is needed, developers should keep in mind the surroundings as well as the development. The campus can be assessed for the quality of its surroundings such as vegetation and streams/rivers, as well as vistas such as views of mountains, lakes, etc.

TABLE 1

## ALABAMA--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Aesthetically pleasing landscape
Health and safety aspects considered
Water supply sufficient for campus
Positive drainage of site
Artistic landscape in areas of high exposure
Existing trees left as a base to the landscape
Drives, walks, parking lots part of landscape
Relationship to environment considered
Manicured lawns necessary in main areas
Streams, ponds, natural areas used in studies
Natural landform utilized
Recreational areas well developed
Soil tested for vegetation growth
Community use considered
Utilities included in design
Gardens, flower-beds utilized
Developmental cost budgeted
Maintenance cost budgeted

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Because aesthetic value is subjective, the Department of Education for Alaska stressed the importance of the local community establishing the aesthetic values for themselves.

The guidelines for campus beautification developed in Alaska appear in Table 2.

## Arkansas

The Arkansas Department of Education developed guidelines for planning school facilities, (1975), which stated that much planning should go into the selection and development of the campus. The beauty of the site is

TABLE 2

## ALASKA--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable Future expansion allowed for Aesthetically pleasing landscape Orientation to winter sun essential Protection from cold winds Land use restrictions considered Soil conditions sufficient to support vegetation Frost heave stability considered Permafrost stability considered Design allows for flood control Health and safety factors high priority Erosion control practiced Water supply sufficient for entire campus Positive drainage allowed for Streams, ponds, natural areas used in studies Natural landform utilized Subsoil conditions tested Community use considered Utilities included in design Developmental cost budgeted Maintenance cost budgeted

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supportive of the educational program. The Department of Education for Arkansas suggested that the trend is for larger areas for buildings, outdoor teaching areas, recreational grounds, and parking lots. Periodic surveys were advised so the school may project its future plans. The department warned that real estate near a campus is soon occupied, and for this reason it is advisable to acquire enough space for future growth.

The department continued by saying the campus should be near the center of and accessible to the population to be served. Utilities needed should be available at

reasonable cost. Elevation, drainage, and subsoil should be adequate for development. The environment of the area, future growth of highways, factories, and commercial firms should be considered.

The Arkansas Department of Education stated that the development of the campus is very important and districts are urged to allocate an adequate budget for landscaping and the proper development of driveways, loading areas, and parking areas. Arkansas suggested that the minimum size for a senior high school is 30 acres plus one acre for each 100 students. The number of students should be based upon projected maximum enrollment. Wise planning might call for additional space added to these minimum figures to provide for community use of campus facilities and unforeseen changes in future educational planning. The campus is an essential part of the educational plan and one of the fundamental instruments in the educational process. Table 3 reflects the guidelines of the Arkansas school system.

#### California

The state of California (1966), through its State Department of Education developed guidelines for campus beautification and stressed the importance of providing well-kept and well-landscaped grounds. The department recommended that the ratio between developed grounds around buildings and the building areas themselves should be approximately 2:1.

TABLE 3

## ARKANSAS--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable Future expansion allowed for Aesthetically pleasing environment Health and safety first priority Positive drainage allowed for Artistic landscape in entrance areas Drives, walks, parking part of landscape Relationship to environment essential Natural elevations to be used Recreational areas fully developed Topsoil conditions tested Subsoil conditions tested Community use considered Developmental cost budgeted Maintenance cost budgeted

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The Education Department stressed that in instances where this ratio has not been followed and where the area of developed grounds had replaced lawn areas with asphalt gives a total setting which is sterile and depressing. They continued by saying that the land required for the grounds might be used to its maximum by providing well-planned walks, lawns, outdoor classrooms, and courtyards.

In a later report, the State Department of Education (1969) stressed the importance of planning for the future. Campuses should be designed for the safety and comfort of the people that work at the educational facilities. The challenge was to provide the best environment for the students as they prepare for a better life.

The department developed a report (1973) consisting of a profile rating wheel that helped in the development of school facilities and their surroundings. It emphasized among other things the need of the campus being large enough and located close enough to the community it serves as well as in close proximity to parks and recreational facilities. The safety of the students was another factor which received significant attention. The campus should be located away from freeways, railways, aircraft flight patterns, dangerous traffic intersections, high-voltage lines, ravines, and other hazards.

The report also pointed out the importance of developing the campus and still retaining existing trees, shrubs, streams, outcroppings, interesting topography, and other natural features which could be useful to the curriculum. A master plan that shows in detail all recreation areas and landscaping should be prepared. The report also stated that if initial funds were inadequate for complete campus development, the implementation of a long-range financial program should be developed.

In another report (1976), the State Department of Education for California recommended that the master plan include the philosophy and mission statement of the district. The plan should be designed so it can be easily up-graded to meet changing needs of a community and be

flexible enough to allow necessary changes as the campus develops.

The California State Department of Education produced another report (1978) in which they stressed the importance of utilities for the campus. The department observed that gas, electricity, water, sewer, and storm drainage lines should be adequate for the future needs of the institution. The department also stated that the topography should provide drainage without the need for erosion control and have sufficient near-level areas for buildings, recreational areas, and parking to avoid excessive soil excavation or fill. The campus is an integral part of the educational plan and one of the basic tools in the educational process. Table 4 reflects the guidelines of the California Department of Education.

#### Connecticut

The state of Connecticut through its State Department of Education published two booklets that contain guidelines for campus beautification. The first one (1970) was specifically for site selection and acquisition. In it, several points were mentioned on beautification of the grounds. It noted that the school site is not simply a parcel of land upon which a school can be constructed, but a functioning part of the school plant with educational purposes. It should provide for considerable community recreation opportunities.

TABLE 4

## CALIFORNIA--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site adequate Future expansion allowed for Health and safety considered in design Water supply sufficient for entire campus Positive drainage incorporated in design Erosion control practiced Artistic landscape in high use areas Existing trees retained in the development Drives, walks, parking blended in design Streams, ponds-natural areas used for study Natural landform utilized Recreational area part of landscape Community use included in plan Utilities considered in landscape Gardens-flower beds used for supply to campus Vegetation growth well-cared for Developmental cost budgeted Maintenance cost budgeted

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The campus can also be used as an outdoor laboratory--an area of consideration often overlooked by administrators and planners. Science instruction can be vastly improved and the powers of observation sharpened through natural features which a site may offer, including:

- A pond or stream
- A marsh or boggy area
- A stand of timber
- A cavern or similar formation
- A shore or beach
- A gorge or other geological formation

Such areas, if not destroyed in making site "improvements," offer much valuable material for direct study of animal, plant, and marine life in a natural



habitat, as well as advocate conservation and related matters.

Agriculture instruction can be vastly increased in effectiveness when a gardening area of suitable character is provided. Students can learn horticulture and various properties of soils.

In the other booklet published by the Connecticut State Department of Education (1980), it was noted that the location of a school campus in relation to the community should have an aesthetically blending landscape to please adjacent property owners. It was suggested that trees and shrubbery be located so as not to obstruct views or to provide a hiding places for vandals. Key areas--such as main entrance driveways, entrances to buildings, service areas, recreational areas, sky lights, and administrative offices--are to be readily visible. Trees should be located so they do not provide access to the roofs of buildings. Low plantings are advised in key areas; and because thorn bushes can collect debris they should be avoided. The guidelines of the Connecticut Department of Education appear in Table 5.

#### Delaware

The state of Delaware (1975), through its Department of Public Instruction, developed a document giving procedures to be followed in campus selection and development. Little was said about campus beautification

TABLE 5

## CONNECTICUT--CAMPUS BEAUTIFICATION GUIDELINES

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 Beautification Criteria Found in Guidelines
 

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Size and shape of site suitable  
 Health and safety number one priority  
 Water supply sufficient for entire campus  
 Existing trees left as a base in campus design  
 Positive site drainage developed  
 Artistic landscape in high use areas  
 Drives, walks, parking lots blended in landscape  
 Natural elevations used for certain elements  
 Recreational areas cared for  
 Relationship to environment considered  
 Manicured lawns in entrance areas  
 Vegetation growth cared for  
 Streams, ponds--natural areas used in studies  
 Community use considered in design  
 Gardens/flower beds provides vegetation  
 Developmental cost budgeted  
 Maintenance cost budgeted

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and the aesthetics of the site, most of the attention being focused on safety and selection.

Two of the main areas with which Delaware was concerned is size and shape of the property. The suggested guideline for the size of property for a high school was 30 acres plus one acre per 100 students. The ideal shape for a campus site would be a rectangle with the dimension in a ratio of approximately three to five or five to eight. Radical elevation changes and marsh lands should be avoided to preclude the cost of special architectural and engineering features. The site should have test borings and surveys conducted to determine the general character of the soil and surface conditions relative to rock

formations, local water table, drainage, and ability to support a structure.

The prime factors in the selection and development of a site was for the safety of the students and teachers. Students should not have to cross any busy streets or railroad tracks, and major utility lines should not cross the site. A roadway should not separate the buildings from recreation areas. Table 6 reflects the guidelines of the Delaware school system and reflects the importance placed on campus beatification.

#### Florida

The state of Florida (1978), through its State Board of Education had taken a rather detailed position concerning campus beautification and safety. Florida guidelines stated that the campus should be landscaped in such a way as to enhance the beauty of the site and promote the safety of the people that it serves. The site should be well drained without any open ditches that may be a safety hazard to the students. Shrubs and trees should be well maintained and placed in such a way that they do not obstruct visibility or create a hazard to the normal flow of pedestrian or vehicular traffic.

The grounds should receive daily care to maintain their beauty and to protect users from possible hazards such as broken glass, trash, undergrowth, and any debris that would encourage the concealment of pests.

TABLE 6

## DELAWARE--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Health and safety high priority
Water supply sufficient for campus
Positive drainage built in design
Drives, walks, parking lots part of landscape
Relationship to environment considered
Natural landform used as part of development
Recreational areas designed as part of landscape
Type of soil important for vegetation growth
Subsoil conditions tested
Community use part of design
Utilities part of design
Developmental cost budgeted
Maintenance cost budgeted

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The guidelines for the state of Florida stated that the lighting for the campus should be adequate for the enhancement of the grounds and for the safety of the people and property during the hours of darkness. Artificial illumination for the protection within all parking areas for programs and activities should be sufficient to create an atmosphere of beauty and safety. The guidelines of the Florida school system appear in Table 7.

## Georgia

The state of Georgia, through its Department of Education (1980), had taken a rather flexible position concerning campus beautification. The criteria for site development depended largely on the size and shape of the

TABLE 7

## FLORIDA--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Aesthetically pleasing landscape Health and safety important to landscape design Water supply sufficient for entire campus Positive drainage provided Site flooding prepared for Existing trees kept as a base for landscaping Drives, walks, parking lots part of landscape Relationship to environment considered Streams, ponds--natural areas used in studies Natural landform used for campus development Recreational areas well-developed Subsoil conditions tested Community use considered in design Vegetation growth important in design Developmental cost budgeted Maintenance cost budgeted

campus and the desire of the community and the district to develop it to its potential. The state of Georgia leaves considerable room for the local community to develop the campus to blend with the local district. It was stressed that possible expansion and anticipated community use of the school area be factors considered when developing the site. The site should possess physically desirable characteristics and be located so surrounding areas reflect characteristics conducive to the development of attitudes and responses in students considered to be socially, culturally, and educationally desirable.

Table 8 reflects the guidelines of the Georgia school system.

TABLE 8

## GEORGIA--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable Future expansion allowed for Aesthetically pleasing in high use areas Health and safety given high priority Water supply ample for entire campus Land use restrictions considered Type of soil tested for vegetation growth Positive drainage allowed for Site flooding control Drives, walks, parking lots part of landscape Relationship to environment practiced Streams, ponds--natural areas used for study Natural landform used in design Recreational areas well developed Subsoil conditions tested Community use part of design Developmental cost budgeted Maintenance cost budgeted

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## Hawaii

The state of Hawaii, through its Department of Accounting and General Services, (1983) developed regulations for campus development. The campus should be developed with trees and other aesthetic assets. Good views of the beaches or the mountains are advised. Wind direction should be considered when placing trees and shrubs because of the possibility of strong winds and heavy rain. The use of the land around the buildings should supplement the studies in the classrooms.

The topography of the campus should remain unchanged as much as possible to retain its landform and to reduce

the cost of grading. Trees and other vegetation already in existence should be left in place. Natural areas should be provided for study and pleasure. Landscaping in the form of planting and courtyards should be provided to make the campus an aesthetically pleasing facility.

Another criteria in the guidelines for the state of Hawaii explained that pedestrian access to the campus should not be near heavily traveled roads. Pedestrian circulation should flow easily and safely. The walkways should be wide enough to handle anticipated traffic and should be covered due to wet conditions that exist in the area. The walkways and entrances should provide easy access for the handicapped.

Table 9 reflects the guidelines of the Hawaii school system.

#### Idaho

The state of Idaho, through its Department of Education, (1972) had rather limited guidelines for campus beautification. One of their first requirements for campus development was to state a philosophy, develop a master plan, and follow it as closely as possible. The site should be large enough to handle expected enrollments of the future.

The actual selection and development of the campus is a variable and, therefore, final determination of the selection and development should involve school officials,

TABLE 9

## HAWAII--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Aesthetically pleasing landscape
Health and safety given high priority
Water supply sufficient for entire campus use
Positive drainage allowed for
Flooding control built in design
Artistic landscape in entrance areas
Existing trees left undisturbed
Campus furniture use in landscape
Drives, walks, parking lots part of landscape
Relationship to environment considered
Streams, ponds--natural areas left for study
Natural landform utilized
Vegetation growth taken into consideration
Recreational areas included in landscape
Community use considered in design
Developmental cost budgeted
Maintenance cost budgeted

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the architect, the landscape architect, legal and recreational consultants.

The environment of the campus should provide, to the greatest possible degree, safe and healthful conditions for the students and teachers. The grounds should be maintained and provide a pleasant situation in which to study and learn.

The guidelines continued by stating that the site should lend itself to a pleasing landscaping development and good drainage. Development of a school campus which involves landscape design, land-use planning, and the solution to engineering problems should be made



concurrently with plans and specifications from the site plan. Table 10 gives the basic requirements for Idaho.

### Illinois

The state of Illinois (1976), through its Capital Development Board, developed regulations for campus beautification. The regulations noted that the campus should be located and developed in accordance with the surrounding community. The recommended location should be in close proximity to relevant public facilities such as a public library, park, or community center, and should be located in a predominantly residential neighborhood.

The campus should be landscaped in such a way as to provide good drainage, to provide protection from flooding and be of regular configurations so as to accommodate the school's buildings, landscape design, recreation activities, and outdoor studies.

The state of Illinois declared that the safety of the occupants should be considered first in all aspects of campus development and beautification.

The water supply for the campus should be safe and of sufficient volume and delivery to serve the needs of irrigation. The site plan should include all utilities to the campus, the location of trees, and the planting design so no conflicts will arise.

The Illinois Capitol Development Board recommended the

TABLE 10

## IDAHO--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Aesthetically pleasing landscape
Health and safety built into design
Water supply sufficient for campus
Positive drainage allowed for
Artistic landscape in high use areas
Drives, walks, parking lots part of landscape
Relationship to environment important
Natural landform utilized
Recreational area part of landscape
Community use allowed for
Vegetation growth maintained
Developmental cost budgeted
Maintenance cost budgeted

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guidelines shown in Table 11 as an integral part of the educational plan basic in the development of the campus.

## Indiana

The state of Indiana (no date), through its Department of Public Instruction, developed a document that gave limited procedures for campus planning and development. Special considerations were recommended for landscape design of the campus, including the location of trees, shrubbery, vegetation, and the suitability of these elements in relation to an academic environment.

Care should be given to the blending of the soft landscape with the hard landscape (such as walks, drives,

TABLE 11

## ILLINOIS--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of campus suitable
Future expansion allowed for
Health and safety high priority
Consideration of land-use restrictions
Type of soil important for vegetation growth
Water supply sufficient for campus
Site developed for positive drainage
Adequate flood control
Existing trees preserved as a base for landscape
Relationship to environment essential
Master/site plan developed
Existing landform used
Planned recreational areas
Good subsoil conditions required
Vegetation on the campus maintained
Provision made for community use
Utilities considered in planting design
Development cost budgeted
Maintenance cost budgeted

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and parking lots) so that an aesthetically pleasing atmosphere is evident.

The guidelines for the state of Indiana stated that safety is of prime importance in the development of the campus and should be considered in every aspect of design. The campus should be free from hazards caused by traffic, pollution, utility lines, and geological factors; however, some geological factors such as natural areas, ponds, and rock formations could be used in outdoor instruction, supplementing and supporting classroom theories.

The Guidelines suggested that the community should be involved in the development of the campus. This enhances

the cooperation between the institution and community and provides for better working relationships. The community should be encouraged to help in the planning of campus beautification and be invited to make use of the school's facilities. Table 12 gives the guidelines recommended by the state of Indiana.

TABLE 12  
INDIANA--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site adequate
Future expansion allowed for
Aesthetically pleasing landscape
Health and safety high priority
Consideration of land-use restrictions
Water supply sufficient for campus
Existing trees saved as base for landscape
Soft and hard landscape blended
Relationship to environment essential
Incorporation of natural study areas
Existing landform utilized
Planned recreational areas
Vegetation on the campus maintained
Provision made for community use
Utilities considered in planting design
Development cost budgeted
Maintenance cost budgeted

#### Iowa

The state of Iowa (1974), through its Department of Public Instruction, developed a detailed set of recommended guidelines for sites, facilities, and equipment. Iowa stated that the campus for a modern educational program should provide space for such functional requirements as

outdoor learning experiences, outdoor education, recreation, parking, loading, drives, and walks. The campus should be designed for flood control and good drainage. Safety should be given high priority when planning drives, walks, loading docks, and recreational areas. Sidewalks should be functional and able to accommodate the traffic load at peak times.

Trees, plants, shrubs, grasses, etc., used in landscaping should complement the curricular offerings of the school by being the same kind as cited in the adopted science curriculum. The landscape design should reflect the ideals of the community and the geographical areas.

The parking lots should be surfaced with all weather material in order to withstand all types of weather. Recreational areas should be well-drained, and those with hard surface should be treated for all weather conditions. The full use of the campus is an indispensable component of the educational plan in Iowa. Table 13 reflects the guidelines of the Iowa school system.

### Kentucky

The state of Kentucky (no date), had minimal guidelines in comparison with other states; however, the educational leaders in Kentucky stated that the regulations were adequate to meet their needs.

The campus should have adequate water supply to meet the demands for the entire campus. The size and shape of

TABLE 13

## IOWA--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Campus aesthetically pleasing
Campus artistically landscaped
Existing trees left as a base for landscape
Health and safety high priority
Plants exposed to sun direction
Soft and hard landscape blended
Site developed for good drainage
Relationship to environment essential
Natural study areas incorporated
Landscape design to be part of curriculum
Planned recreational areas
Vegetation on the campus maintained

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the campus should be sufficient to meet future as well as present needs.

It seemed that the educational leaders of Kentucky were more concerned with legal matters than guidelines for campus beautification. Table 14 reflects the guidelines listed for Kentucky.

TABLE 14

## KENTUCKY--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Health and safety high priority
Consideration of land-use restrictions
Water supply sufficient to meet all needs

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### Maine

Maine State Department of Educational and Cultural Services (1983), prepared a self-evaluation document which covered several areas of education. One area was school climate, of which campus beautification was a part. This document provided information to the Department of Education upon which educational decisions were made.

A school's climate is the product of the interaction of the variety of elements that support the process of education. A desirable school climate includes an orderly relationship with the environment and is a blend of all the various elements that make up the school's educational community.

The principal or administrator is the primary leader in providing a good school climate. In effective schools, the principal or president functions as a strong educational leader. The site should provide a comfortable place of learning for the students, and a place of pride for the community. The community should be involved in the planning and development of the campus. Table 15 reflects the guidelines of Maine.

### Maryland

The state of Maryland (1983), through its Public School Construction Program, developed procedures for site selection and analysis. Very little was mentioned about campus beautification except that the site should be large

TABLE 15

## MAINE--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Campus aesthetically pleasing
Campus artistically landscaped
Existing trees left as a base for landscape
Health and safety high priority
Relationship to environment essential
Natural study areas incorporated
Landscape used as part of curriculum
Planned recreational areas
Land-use restrictions considered
Community involved in planning

enough to allow for outdoor experiences. Sufficient water supply and good soil conditions should be part of the site selection. Therefore, Maryland had limited guidelines (See Table 16).

TABLE 16

## MARYLAND--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Health and safety high priority
Soil tested for vegetation growth
Sufficient water supply available
Relationship to environment essential
Land-use restrictions considered

## Massachusetts

The Commonwealth of Massachusetts (1977), in conjunction with the its Department of Education, developed



requirements for site selection and development. The Guidelines stated that the campus should meet educational needs and minimize any possible adverse educational, environmental, social, or economic impact on the community. The campus should be of sufficient size to accommodate outdoor educational programs and be planned aesthetically. Proximity to other facilities such as natural resources and nature-study areas which would enhance the proposed educational program should be carefully studied and was strongly encouraged. Safety for the school population was of utmost importance when considering the development of the campus. The development of the site should not be excessively costly to the community, thus unusual landform

TABLE 17

## MASSACHUSETTS--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of campus adequate
Future expansion allowed for
Campus aesthetically pleasing
Health and safety high priority
Consideration of land-use restrictions
Topsoil sufficient to support vegetation
Water supply sufficient for campus
Relationship to environment essential
Natural study areas incorporated
Existing landform utilized
Planned recreational areas
Vegetation on the campus maintained
Provision made for community use
Development cost budgeted
Maintenance cost budgeted

or undesirable soil conditions should be avoided. Table 17 lists the guidelines for the Commonwealth of Massachusetts.

### Michigan

The state of Michigan (1973), through its Department of Public Instruction, developed a set of suggestions for campus beautification in its schools. The opening statement of the guidelines stressed the need for action. Cost had been considered in the planning and the suggestions were for low-cost landscaping. The guidelines were developed to provide teachers, administrators, and landscape architects with insights into creative development and use of the school site as a laboratory for learning. Landscape features which can enhance learning may include the study of flowers, foliage, bark, color, and textures of landscape elements. Students could be involved in planning and establishing of a beautiful campus.

The guidelines continued by saying the natural areas of the campus could be used to study wildlife and their food supply and nesting sites. Beautification can make students more civic minded and aware of the total community. The students could study micro-climate effects by studying wind, temperatures, shade, glare, retention of rainfall, and soil types. Aesthetic values could be taught through planting, mowing, pruning, and caring for the soil.

Tree planting for fund raising was suggested by the state of Michigan. Most schools could develop a small tree

farm that could be planted, managed, and harvested by the students as part of their classroom instruction. Michigan

TABLE 18

## MICHIGAN--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Consideration of land-use restrictions
Type of soil important for vegetation growth
Water supply sufficient for campus use
Site developed for positive drainage
Adequate flood control
Artistic landscape in high use areas
Blending of soft and hard landscape
Existing trees saved and used
Manicured lawns in entrance areas
Landscape considered with curriculum
Natural areas used for study
Flower beds for supplying the campus
Relationship to environment essential
Master/site plan developed
Existing landform utilized
Planned recreational areas
Good subsoil conditions required
Vegetation on the campus maintained
Provision made for community use
Utilities considered in planting design
Development cost budgeted
Maintenance cost budgeted

had one of the best published guidelines for campus beautification (See Table 18).

## Minnesota

The state of Minnesota, through its publication,  
Guide for Educational Planning of Public School Buildings

and Sites (1971), gave recommendations for site selection and development. Under the section for site development, several criteria were given for campus beautification.

Careful planning procedures were recommended for each site with a complete master/site plan which included planting and landscape designs. The same general planning procedures used for planning the buildings were also to be used for outdoor facilities. The process of educational planning, writing educational specifications, and architectural designing was applicable to the campus as well as buildings. The master plan should include such things as grading, drainage, water supply, road and walk construction, parking area construction, and other outdoor facilities. The grounds should be developed to include beautification of lawns and boundaries, screening of parking areas and service features, shade, and recreation activity.

The state of Minnesota suggested that the cost for excavation and foundation walls could be reduced by fitting buildings to the contour of the land. Maintenance could be reduced by careful planning and reducing steepness of banks that might be subject to erosion; for safety in grass mowing, slopes should not be excessive.

Walks should be direct, convenient, and natural to encourage people to stay on them. Walks should be three 24-inch lanes, making a total width of 72 inches.

The community should be cooperatively active in the development of the campus and be included in the planning and development stage. The community may agree to take part in the acquiring, equipping, and maintaining of the site in return for the use of certain areas. Like Michigan, Minnesota developed extensive guidelines for campus beautification. Table 19 reflects those suggestions.

TABLE 19

## MINNESOTA--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Consideration of land-use restrictions
Type of soil important for vegetation growth
Water supply sufficient for entire campus
Site developed for positive drainage
Adequate flood control
Artistic landscape in high use areas
Blending of soft and hard landscape
Existing trees saved and used
Manicured lawns near entrance areas
Landscape considered with curriculum
Natural areas used for study
Flower beds for supplying the campus
Relationship to environment essential
Master/site plan developed
Existing landform utilized
Planned recreational areas
Good subsoil conditions required
Vegetation on the campus maintained
Provisions made for community use
Utilities considered in planting design
Development cost budgeted
Maintenance cost budgeted

### Mississippi

The state of Mississippi (1972), through its Department of Education, developed limited guidelines for campus beautification. The main emphasis were on size and shape to accommodate all educational activities, recreational areas, drainage, and flooding control. Mississippi simply stated that the campus should be well landscaped to create a feeling of pride and give pleasure to the eye. The grounds should be designed for good circulation with a minimum of interference. Table 20 gives the beautification criteria of the state of Mississippi.

TABLE 20

#### MISSISSIPPI--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Site size and shape adequate for campus
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Consideration of lands use restrictions
Site developed for positive drainage
Artistic landscape near entrance areas
Existing landform utilized
Planned recreational areas
Vegetation on the campus maintained
Provisions made for community use
Development cost budgeted

### Montana

The state of Montana, through its State Board of Health, published a small booklet entitled School Environment (1963), in which campus development and

beautification guidelines were given. It stated that a well-maintained campus adds greatly to the appearance of the institution and tends to promote a safer and more enjoyable place for attendance and recreation. An ample site is more important in most instances than a centrally located one, particularly for college or high school.

The area should be sufficient to provide adequate space for school activities. Provisions for satisfactory water supply and sewage disposal, as well as space for recreation, and parking vehicles should be considered.

The topography of the site should be such that slopes are moderate, but sufficient to permit good drainage of surface water. The soil should be sufficiently porous to maintain a reasonably dry landscape on the surface. All parts of the grounds should be inspected regularly. Obstructions and material which may prove dangerous should be removed. The campus is an integral part of the educational plan and one of the basic tools in the educational process. Table 21 reflects the guidelines of the Montana school system.

#### New Hampshire

The state of New Hampshire (1975), through its State Department of Education, placed positive emphasis upon campus beautification providing flexibility in its guidelines. New Hampshire stated that the campus plays an important role in meeting the educational, aesthetic,

TABLE 21

## MONTANA--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
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Campus size and shape adequate for development Future expansion allowed for Health and safety given high priority Aesthetically landscaped in high use areas Type of soil important for vegetation growth Water supply sufficient for entire campus Site developed for positive drainage Blending of soft and hard landscape Existing landform utilized Planned recreational areas Good subsoil conditions required Vegetation on the campus maintained Provision made for community use Utilities considered in planting design Development cost budgeted Maintenance cost budgeted
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and technical requirements of the total plan. Criteria for the development of the campus should be flexible enough to meet the unique circumstances of each community. The campus should be large enough for future expansion and should be developed with the curriculum in mind. Pleasing surroundings enhance the educational experience for the faculty, staff, and students.

The state of New Hampshire stated that the campus could no longer be viewed merely as a place to locate a school. It has a more important role in the total school and community picture. Those involved in the selection should consider the following:

1. Does the campus offer opportunities for outdoor educational activities?



2. Does the topography of the campus allow ample room for recreational and physical education activities for the entire school enrollment?

3. Does the site provide opportunity for educating the students in the conservation of natural resources?

4. Is the site used to provide means of educating students in ways of combatting pollution of natural resources?

5. Is the campus integrated with the community for recreational and other activities?

The guidelines for New Hampshire concluded by stating that the cost of developing a campus should be evaluated carefully, especially in the light of increasing costs and the diminishing availability of land. It was clear that New Hampshire was dedicated to providing beautiful campuses for its schools, as the guidelines in Table 22 reflect.

#### New Jersey

The state of New Jersey through its Department of Education, printed sophisticated guidelines developed for campus beautification in a booklet entitled School Sites (1977), one in a series of booklets for planning educational facilities. This multi-volume series, along with those developed in Michigan and Minnesota are some of the most thorough found in this study. New Jersey guidelines recommended that each institution acquire the services of a competent landscape architect and develop a master/site plan right from the beginning.

TABLE 22

## NEW HAMPSHIRE--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site adequate
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Consideration of land-use restrictions
Soil tested for vegetation growth
Water supply sufficient for campus
Site developed for positive drainage
Artistically landscaped in high-use areas
Landscape considered with curriculum
Natural areas used for study
Relationship to environment essential
Master/site plan developed
Existing landform utilized
Planned recreational areas
Good subsoil conditions required
Vegetation on the campus maintained
Provision made for community use
Utilities considered in planting design
Development cost budgeted
Maintenance cost budgeted

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Most campuses are planted with lawns and shrubs at right angles and in curves of drives and walks. Tall trees are used to frame buildings and shade trees are used informally over the campus. Whatever the class of tree or plant utilized, groupings should be designed with respect to height, color, and cultivation requirements.

Resourceful planning of the landscape can diminish the amount of noise and vail unwanted visual effects transmitted from highways and other noise-producing areas such as parking areas, service drives, and refuse-disposal units.

The New Jersey guidelines stated that where money shortages exist, beautification could still become a reality with the use of a comprehensive plan which permits the work to be done progressively over a period of years. If all of the landscape planting cannot be done at once, the planting of lawns and trees should be given first priority over shrubs and flowers. Grass suitable for the soil and climate and intended usage should be grown on all areas not used for special purposes.

Generally, the grounds should be planted in an informal manner with plants which are indigenous to the area. Shrubs enhance the campus and should be carefully selected according to climate, soil, and shade conditions. Trees, the base for landscaping, should not be located too close to buildings because falling leaves and debris may cause damage to the roofs.

The landscape can also be used for educational purposes as well as beautification. The study of newly planted trees, shrubs, and plants of a wide variety and a well-maintained pond or stream has endless possibilities. Obviously New Jersey educators considered the campus an integral part of the educational plan. Table 23 reflects the guidelines of the New Jersey school system.

TABLE 23

## NEW JERSEY--CAMPUS BEAUTIFICATION GUIDELINES

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 Beautification Criteria Found in Guidelines
 

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Site size and shape sufficient for development  
 Future expansion allowed for  
 Health and safety given high priority  
 Aesthetically landscaped in high use areas  
 Consideration of land-use restrictions  
 Type of soil important for vegetation growth  
 Erosion control practiced  
 Existing trees left as a base for landscape  
 Blending of soft and hard landscape essential  
 Flower beds developed for campus use  
 Water supply sufficient for campus  
 Site developed for positive drainage  
 Artistically landscaped in high use areas  
 Landscape considered with curriculum  
 Natural areas used for study  
 Relationship to environment essential  
 Master/site plan developed  
 Natural landform utilized  
 Planned recreational areas  
 Good subsoil conditions required  
 Vegetation on the campus maintained  
 Provision made for community use  
 Utilities considered in planting design  
 Development cost budgeted  
 Maintenance cost budgeted

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## New York

The state of New York (1977), through its State Education Department Division of Educational Facilities Planning and the University of the State of New York, developed guidelines for its educational institutions. Development of school campuses has historically contributed to the attractiveness and improvement of the community. It is more important now than ever that campus development be consistent with, and a positive factor in regard to,

environmental concerns and conservation of natural resources. New York published a pamphlet "School Site Standards, Selection, Development," through the Division of Educational Facilities Planning. This pamphlet contained standards for institutions in New York.

New York stated that the appearance of the campus is influential to the educational program. They also stated that students often choose a campus because of its appearance. The campus should give the student a sense of place in their academic accomplishments. The environment of the campus should be inviting, attractive, and comfortable. The campus can become the pride of the community and can make a clear statement about the goals of the institution. The grounds should be developed to be functional and appealing to the visitor, student, staff, and faculty. The campus creates a setting for the institution from which its image is derived. The character of the landscape serves as more than a pleasing element, it forms a positive image for the institution. Table 24 reflects the concerns for campus beautification found in the criteria for the state of New York.

#### North Carolina

The state of North Carolina (no date), through its Department of Public Instruction, gave limited recommendations for site development. The brief outline provided by North Carolina stated that a master plan should

TABLE 24

## NEW YORK--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable
Future expansion allowed for
Health and safety given high priority
Aesthetically landscaped in public areas
Use of campus furniture to enhance landscape
Consideration given land-use restrictions
Type of soil important for vegetation growth
As many existing trees as possible saved
Blending of soft and hard landscape essential
Flower beds developed for campus use
Water supply sufficient for irrigation
Site developed for positive drainage
Artistically landscaped in main entrance
Landscape considered with curriculum
Natural areas used for study
Relationship to environment essential
Master/site plan developed
Existing landform utilized
Planned recreational areas
Vegetation on the campus maintained
Provision made for community use
Development cost budgeted

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be developed to show existing trees and other significant vegetation, contours, lakes, streams, and other features that might be retained in the development of the campus. It also stated that any landscape element that could be used in the beautifying of the campus and in the curriculum should be left undisturbed.

Outdoor education should include a variety of trees, shrubs, weeds, flowers, and natural areas for supplementing lessons in the regular classroom. Table 25 gives the criteria for campus beautification for North Carolina.

TABLE 25

## NORTH CAROLINA--CAMPUS BEAUTIFICATION GUIDELINES

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 Beautification Criteria Found in Guidelines
 

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Size and shape of site adequate  
 Future expansion allowed for  
 Health and safety high priority  
 Type of soil important for vegetation growth  
 Frost stability considered for plantings  
 As many existing trees as possible salvaged  
 Water supply sufficient for irrigation  
 Site developed for positive drainage  
 Landscape considered with curriculum  
 Natural areas used for study  
 Relationship to environment essential  
 Master/site plan developed  
 Utilities considered when planting  
 Planned recreational areas  
 Provision made for community use  
 Development cost budgeted

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## Pennsylvania

The state of Pennsylvania (1980), through its Department of Education and Bureau of Educational Administration and Management Support Services had several suggestions for campus beautification. Safety was of prime importance in the design of the campus, especially in consideration of such areas as walkways, loading and unloading docks, recreational areas, and steps. Proper orientation of buildings for site drainage, solar considerations, future expansion, and the retaining of natural terrain and growth was encouraged. Reasonable economy in developing and landscaping the campus should be

practiced. Table 26 reflects the minimum suggestions for the state of Pennsylvania.

TABLE 26

## PENNSYLVANIA--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Site size and shape suitable Future expansion allowed for Health and safety high priority Consideration given to exposure to sun and solar concerns Consider land-use restrictions As many existing trees as possible conserved Water supply sufficient for irrigation Site developed for positive drainage Blending of soft and hard landscape important Natural areas used for study Relationship to environment essential Planned recreational areas Natural landform utilized Vegetation on the campus maintained Development cost budgeted

## Tennessee

The state of Tennessee through its Department of Education, developed a booklet entitled Manual for Administrators on School Plant Planning (1964), which had a section on school sites. Tennessee recommended that site development be based on community-centered educational needs. Campus beautification should be planned into the master plan of the institution, and the institution itself should be located in a mainly residential area. A good site is usually rectangular in shape with a ratio of approximately three to five. The buildings should be



located on the site in a manner that creates a need for a minimum amount of drives and walks, and provides for a maximum amount of outdoor recreation and educational areas.

The campus should be developed for good drainage but should not cause erosion nor be too steep for recreation areas. The campus should have attractive landscaping where aesthetic surroundings are maintained. This type of setting tends to reduce vandalism and develops a spirit of appreciation of beauty on the part of the students. An ideal school site creates an environment in which educational goals and objectives may be achieved. The campus is an integral part of the educational plan and one of the basic tools in the educational process. Table 27 reflects the guidelines of the Tennessee school system.

#### Vermont

The state of Vermont through its Department of Education, published a booklet entitled Planning Educational Environments (1972), which included suggestions for campus beautification. Attractive grounds enhance and create pride in the school and community. Vermont recommended that the community become involved in the planning and be encouraged to assist with planting shrubs, trees, and other ground-covering plants. Community involvement in the landscaping of the campus saves money and instills the community with pride in the institution.

School activities take place both inside and outside

TABLE 27

## TENNESSEE--CAMPUS BEAUTIFICATION GUIDELINES

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 Beautification Criteria Found in Guidelines
 

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Site size and shape suitable for development  
 Future expansion allowed for  
 Health and safety high priority  
 Aesthetically pleasing landscape  
 Consideration of land-use restrictions  
 Type of soil important for vegetation growth  
 Water supply sufficient for entire campus  
 Site developed for positive drainage  
 Erosion controlled  
 Artistic landscape in high use areas  
 Landscape considered with curriculum  
 Natural areas used for study  
 Relationship to environment essential  
 Master/site plan developed  
 Existing landform utilized  
 Planned recreational areas  
 Good subsoil conditions required  
 Vegetation on the campus maintained  
 Provisions made for community use  
 Utilities considered in planting design  
 Development cost budgeted  
 Maintenance cost budgeted

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the educational facility. Certain educational activities such as physical education, nature study, conservation, and wildlife study should be considered in the site plan. The community's needs in terms of recreational facilities should also be included and will enhance a well-planned school site. Both the educational and community purposes achieved through the site influence the size, location, shape, and development of the campus.

The state of Vermont, through the Department of Education, recommended the use of a citizens' committee.

This would include students, architect, school administrators, faculty, and other interested people in the planning and development of the campus. Table 28 reflects the guidelines for the state of Vermont.

### Virginia

The state of Virginia (1983), through its State Office of Emergency and Energy Services, gave guidelines for energy efficiency for the campus design, especially in the areas of site and climate and the shape and size of the campus. Virginia's guidelines stated that when designing a master plan and orienting buildings on a site, it is important to take advantage of natural landform and environment in order to compensate for nature's inconveniences. Site factors affecting energy usage include terrain, wind, and orientation.

Consideration of micro-climates is an important aspect of site selection and landscaping. The shape of the site and the topographic features greatly influence how the campus is laid out and designed. Trees can serve as wind breaks from winter winds. Deciduous trees can provide valuable shade for the south wall in summer and still allow desirable solar gain in winter. The sun is an important natural element to consider when the major goal is energy conservation. Landscaping adds beauty to the campus and helps to stabilize temperatures. The pleasant atmosphere

it creates can give peace of mind. Table 29 gives the beautification criteria for Virginia.

TABLE 28  
VERMONT--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable for development
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Consideration of land-use restrictions
Type of soil important for vegetation growth
Existing trees left as a base for landscaping
Water supply sufficient for irrigation
Site developed for positive drainage
Landscape considered with curriculum
Natural areas used for study
Relationship to environment essential
Master/site plan developed
Planned recreational areas
Vegetation on the campus maintained
Provisions made for community use
Development cost budgeted

#### Washington

The state of Washington (1981), through the State Superintendent of Public Instruction developed 16 separate booklets addressing different aspects of school-facilities development procedures. Booklet 3 dealt with site selection and development. Washington guidelines stated that intelligent and imaginative school selection and development are significant aspects of educational facility planning. Campus development affects the educational program, the budget, enrollment, and landscaping. The

TABLE 29

## VIRGINIA--CAMPUS BEAUTIFICATION GUIDELINES

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Beautification Criteria Found in Guidelines
Size and shape of site suitable for development
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Orientation to winter sun considered
Type of soil important for vegetation growth
Site developed for positive drainage
Erosion controlled
Landscape considered with curriculum
Natural areas used for study
Relationship to environment essential
Master/site plan developed
Existing landform used
Planned recreational areas
Utilities considered in planting design
Development cost budgeted
Maintenance cost budgeted

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topography should be conducive to planning an aesthetically pleasing campus. The environment should be such that landscaping and beautification blend with other community facilities and organizations such as parks. The site should have desired trees and other natural vegetation that not only adds to the beauty but is also used as part of the curriculum. It was obvious that the state of Washington had given considerable thought to campus development and beautification, as can be seen in the suggested criteria in Table 30

## West Virginia

The state of West Virginia (1973), through the Board of Education, published a book entitled Handbook on Planning School Facilities. One chapter was devoted to the school site and its development, and one section of the chapter considered campus beautification. West Virginia recommended that the campus should lend itself to landscaping and provide a pleasant natural environment. The buildings on a campus should be an adequate distance

TABLE 30

## WASHINGTON--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable for development
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Consideration of land-use restrictions
Type of soil important for vegetation growth
Water supply sufficient for entire campus
Site developed for positive drainage
Landscape considered with curriculum
Natural areas used for study
Relationship to environment essential
Existing landform used
Planned recreational areas
Good subsoil conditions required
Existing trees used as a base for landscaping
Vegetation on the campus maintained
Provision made for community use
Utilities considered in planting design
Development cost budgeted
Maintenance cost budgeted

from streets, both for aesthetics and for safety. A landscape architect could aid in the development of a

master plan and the plan should include the total campus with an eye to future development. The process of educational planning, writing educational specifications, and architectural designing are applicable to campus beautification. The site design should consider the harmonious visual integration of varied plantings and buildings from all points of view.

The guidelines for West Virginia continued by stating that the plants usually used on a campus include shade trees, evergreen shrubs, deciduous flowering shrubs, and ground cover. In general, a school ground planting scheme should consist of foundation planting, intersection plantings of shrubs at angles and curves of drives and walks, tall trees to frame the buildings, and trees planted in groves for shade. The choice of plants should be those varieties that require minimum maintenance, are known to be sturdy, that thrive in recreational areas, and that tolerate normal amounts of dry weather.

Topsoil should be saved when excavation is necessary and replaced to avoid unnecessary buying of topsoil. Campus beautification can be achieved with minimum expense if thoughtful planning is done when making the master plan and following it. West Virginia had extensive guidelines for campus beautification (see Table 31).

## Wisconsin

The state of Wisconsin (1967), through its State Department of Public Instruction, suggested limited standards for campus development and beautification. Wisconsin stated that the purchase of a larger amount of land than is thought necessary has proven to be a wise choice in most instances. Campus development and landscaping is necessary for the land only in immediate proximity to the building. Natural areas can be left for wildlife and nature studies. The campus should be carefully planned by using all professional personnel

TABLE 31

## WEST VIRGINIA--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable for development
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Type of soil important for vegetation growth
Water supply sufficient for irrigation
Site developed for positive drainage
Relationship to environment essential
Master/site plan developed
Blending of soft and hard landscape important
Existing landform used
Planned recreational areas
Existing trees used in the landscape
Good subsoil conditions required
Vegetation on the campus maintained
Provisions made for community use
Development cost budgeted
Maintenance cost budgeted



necessary in the development of a master/site plan. The campus should be carefully developed to realize the land's full potential to serve a variety of school needs without loss of the aesthetic qualities that make the campus an attractive addition to the community. Table 32 reflects the suggested criteria for campus beautification for the state of Wisconsin.

#### Wyoming

The state of Wyoming (1977), through its Department of Education, developed limited rules and regulations for site selection and development. Wyoming guidelines stated that the site should be landscaped carefully, following the

TABLE 32

#### WISCONSIN--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable for development
Future expansion allowed for
Health and safety high priority
Aesthetically pleasing landscape
Consideration of land-use restrictions
Type of soil important for vegetation growth
Water supply sufficient for campus
Site developed for positive drainage
Landscape considered with curriculum
Natural areas used for study
Relationship to environment essential
Master/site plan developed
Existing trees used in the landscape
Blending of soft and hard landscape
Planned recreational areas
Vegetation on the campus maintained
Provisions made for community use
Development cost budgeted

guidelines of a master plan. Outdoor educational facilities should be a part of the planned landscape and natural areas. The blending of the landscape with the buildings and parking lots is important, and the consultation of a landscape architect was recommended. Table 33 gives the criteria for campus beautification for the state of Wyoming.

TABLE 33

## WYOMING--CAMPUS BEAUTIFICATION GUIDELINES

Beautification Criteria Found in Guidelines
Size and shape of site suitable for development
Health and safety high priority
Water supply sufficient for irrigation
Master site plan essential for planting
Blending of soft and hard landscape
Landscape considered with curriculum
Natural areas used for study
Relationship to environment essential
Planned recreational areas
Utilities considered in planting design
Development cost budgeted

Summary of State Guidelines

The information gathered from the state guidelines provided a basis for recommendations concerning campus beautification for Seventh-day Adventist academies and colleges.

A summary of the data gathered from the states is summarized in table 34. It was noted that there are basic criteria that apply to almost every state.

TABLE 34

## SUMMARY OF 33 STATES WITH PUBLISHED GUIDELINES

Beautification Criteria found in guidelines	ALABAMA	ALASKA	ARKANSAS	CALIFORNIA	CONNECTICUT	DELAWARE	FLORIDA	GEORGIA	HAWAII	IDAHO	ILLINOIS	INDIANA	IOWA	KENTUCKY	MAINE	MARYLAND	MASSACHUSETTS
Campus size and shape	X	X	X	X	X	X		X	X	X	X	X	X	X		X	X
Future expansion	X	X	X	X		X		X	X	X	X	X	X	X		X	X
Aesthetically pleasing	X	X	X				X	X	X	X		X	X		X		X
Exposure to winter sun		X											X				
Protection from winds		X															
Campus furniture									X								
Health & safety hazards	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Land-use restrictions		X						X			X	X		X	X	X	X
Type of soil		X	X			X		X			X					X	X
Frost heave stability		X															
Permafrost stability		X															
Water supply	X	X		X	X	X	X	X	X	X	X	X		X		X	X
Positive site drainage	X	X	X	X	X	X	X	X	X	X	X		X				X
Site flooding controlled		X					X	X	X		X						X
Artistic landscape	X		X	X	X				X	X			X		X		
Erosion control		X		X													X

TABLE 34-Continued

Beautification Criteria found in guidelines	ALABAMA	ALASKA	ARKANSAS	CALIFORNIA	CONNECTICUT	DELAWARE	FLORIDA	GEORGIA	HAWAII	IDAHO	ILLINOIS	INDIANA	IOWA	KENTUCKY	MAINE	MARYLAND	MASSACHUSETTS
Use of existing trees	X			X	X		X		X		X	X	X		X		
Blends hard & soft landscape	X		X	X	X	X	X	X	X	X		X	X				
Relationship to environment	X		X		X	X	X	X	X	X	X	X	X		X		X
Manicured lawns	X				X											X	
Master/site plans											X				X		
Landscape part of curriculum													X				
Natural study areas	X	X		X	X		X	X	X			X	X		X		X
Planned recreational areas	X		X	X	X	X	X	X	X	X	X	X	X		X		X
Subsoil conditions important	X	X	X			X	X	X			X						
Vegetation growth cared for				X	X		X		X	X	X	X	X				X
Community use provided for	X	X	X	X	X	X	X	X	X	X	X	X			X		X
Utilities included in design	X	X		X		X					X	X					
Gardens/flower-beds used	X			X	X												
Landform utilized	X	X	X	X	X	X	X	X	X	X	X	X					
Developmental cost budgeted	X	X	X	X	X	X	X	X	X	X	X	X					X
Maintenance cost budgeted	X	X	X	X	X	X	X	X	X	X	X	X					X

TABLE 34-Continued

Beautification Criteria found in guidelines	MICHIGAN	MINNESOTA	MISSISSIPPI	MONTANA	NEW HAMPSHIRE	NEW JERSEY	NEW YORK	NORTH CAROLINA	PENNSYLVANIA	TENNESSEE	VERMONT	VIRGINIA	WASHINGTON	WEST VIRGINIA	WISCONSIN	WYOMING
Campus size and shape	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Future expansion	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Aesthetically pleasing	X	X	X	X	X	X	X	X		X	X	X	X	X	X	
Exposure to winter sun									X			X				
Protected from winds																
Campus furniture							X									
Health & safety hazards	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Land use restrictions	X	X	X		X	X	X		X	X			X		X	
Type of soil	X	X		X	X	X	X	X		X	X	X	X	X	X	
Frost heave stability								X								
Permafrost stability																
Water supply	X	X		X	X		X	X	X	X	X		X	X	X	X
Positive site drainage	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Site flooding controlled	X	X														
Artistically landscaped	X	X	X		X	X	X			X						
Erosion control						X				X		X				

TABLE 34-Continued

Beautification Criteria found in guidelines	MICHIGAN	MINNESOTA	MISSISSIPPI	MONTANA	NEW HAMPSHIRE	NEW JERSEY	NEW YORK	NORTH CAROLINA	PENNSYLVANIA	TENNESSEE	VERMONT	VIRGINIA	WASHINGTON	WEST VIRGINIA	WISCONSIN	WYOMING
Use existing trees	X	X				X	X	X	X		X		X	X	X	
Blends hard & soft landscape	X	X		X		X	X		X					X	X	X
Relationship to environment	X	X			X	X	X	X	X	X	X	X	X	X	X	X
Manicured lawns	X	X														
Master/site plans	X	X			X	X	X	X		X	X	X		X	X	X
Landscape part of curriculum	X	X			X	X	X	X		X	X	X	X		X	X
Natural areas for study	X	X			X	X	X	X	X	X	X	X	X		X	X
Planned Recreational areas	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Subsoil conditions important	X	X		X	X	X				X			X	X	X	
Vegetation growth cared for	X	X	X	X	X	X	X		X	X	X		X	X	X	
Community use provided for	X	X	X	X	X	X	X	X		X	X		X	X	X	
Utilities included in design	X	X		X	X	X		X		X		X	X			X
Gardens/flower-beds used	X	X				X	X									
Landform utilized	X	X	X	X	X	X	X		X	X		X	X	X		
Developmental cost budgeted	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Maintenance cost budgeted	X	X		X	X	X				X		X	X	X		

### Analysis of Guidelines

The information from the states, visits to Western Michigan University, Michigan State University, Notre Dame University, information gained from professional organizations, direction from the dissertation committee, and the dissertation secretary were the basic sources used in developing the guidelines. A copy of the guidelines was mailed to each principal of an SDA academy and each president of an SDA college in North America.

Ninety-three of the 105 guidelines came back and in addition to marking one of the four options for each question, comments were made as suggested in the cover letter to the principals and presidents.

The guidelines consisted of seven sections. The first section concentrated on the design concept of campus beautification. It was felt that the design concept should come first since a basic design concept is necessary before anything else can be accomplished.

The second section of the guidelines focused on the atmosphere and environment that could be created by a beautiful campus. It was felt that it was necessary to create an atmosphere or environment that would give the students and faculty a sense of belonging.

Part three of the guidelines dealt with the aesthetics of campus beautification. Aesthetics is included because

of the major part it plays in developing a beautiful campus.

The fourth section centered on the framework of planning for a beautiful campus. The framework is fundamental in planning for campus beautification because of the preliminary work required before a plan can be implemented.

The fifth section focused on the importance of landscaping in the planning for a beautiful campus. Landscaping is one of the major factors contributing to the success of the development and can cover a variety of areas.

Part six concentrated on the responsibility of accomplishing the task of developing a beautiful campus. This section was probably the most important because it relates to the persons responsible for putting the plan in to action.

The last section was directed toward the maintenance required for such an operation. Maintenance of the campus is essential after the project has been completed.

There were 55 items in the guidelines with four possible responses; no value, low value, moderate value, and high value. Ninety-three principals and presidents responded to the guidelines and collectively, no value was selected by 1.18%, low value by 7.44%, moderate value by 34.33%, and high value was selected by 55.73%.



High value and moderate value answers were chosen by 90% of the principals and presidents reflecting favorable agreement with the guidelines. However, there were a few items which caused some concern and comments.

One comment suggested a word different from unique to be used in item 3 (The design concept should be a unique expression of the educational facility) in the first section. Upon that suggestion the word was left out of the proposed guidelines to the panel of judges.

Item 6 (The basic design concept should reflect an SDA life style) in the same section drew comments from five of the principals and president because of the phrase SDA life style. This was changed to the following: The basic design concept should reflect an SDA educational institution.

The second part of the guidelines addressed the atmosphere/environment elements of campus beautification. There were five comments concerning item 1. (The atmosphere should provide one with a sense of place) There were three comments about the phrase "sense of place," but this phrase was not altered because of its meaning in this study. Two comments about the word "one" indicated that they were not sure if it referred to a person or to the atmosphere. This item was then altered to read-- The atmosphere should provide a person with a sense of place.

Three comments about item 2 in the second section (The atmosphere should strengthen the morale of the students) from the principals and presidents was in question form. They wanted to know how this could be accomplished. The item was rephrased to state - The environment should provide the opportunity to strengthen the morale of the students - meaning that the morale of the students is based on more than atmosphere or environment, but if one is in a beautiful environment the chance of having high morale is greater.

These were the only items that were rephrased, but other items that received at least 20.0% responses in the no value and low value sections combined were:

Item 6 in the atmosphere/environment section ( A sequence of spaces should be planned which create atmospheres that equate to expectations) received 20.5% of the responses. It was felt that no value and low value was selected this often because of the wording, but it was felt that when carefully studied this question had a lot of meaning and should be left.

Item 6 in the framework section (Areas for community use should be included in the landscape plan) received 29.0% of the responses. It was not clear why this question would receive this response unless most of the campuses represented by the principals and presidents do not allow for community use.

Item 4 in the importance of landscaping section (Rivers, streams, small ponds, waterfalls, and/or fountains could be used to enhance the landscape) received 22.6% of the responses. It was felt that the reason for this was that most of the campuses represented did not have these elements on them.

Item 7 in the same section (Divisions, such as walls, shrubs, and low fences, could be used to separate special areas in the landscape) received 21.6% of the responses. There was only one comment received about this question and the comment indicated support for the idea. This could be a high maintenance area and could have influenced the responses.

Item 3 in the section responsibility (A landscape architect consultant could be employed to enhance campus beautification) received 20.5% of the responses. One comment was received about this question and it stated that the question was vague. Usually within the SDA church landscape architect consultants are not employed and this may be the reason for the high response in the no value and low value areas.

The last item in the guidelines (An endowment should be set up for a continual source of funds for campus beautification) received 31.3% of the responses. There were two comments about this item. The first comment simply stated that they were not sure and did not respond

to the item. The other comment stated "Wouldn't that be nice?" The high response on the low end of the scale is probably due to the lack of endowments used for this purpose within the SDA church.

A line-by-line analysis of the guidelines was conducted. Each item was given a percentage as to how often it was selected by the principals and presidents. The items were reworded if the response so indicated. The results of that analysis is shown by percentages in Table 35.

There were many comments and notes written indicating support of the study and encouraging comments for its success.

As a result of the analysis, suggested campus beautification guidelines were sent to the panel of judges for their evaluation as shown in Chapter 5.

TABLE 35  
PERCENTAGE OF RESPONSES FROM PRINCIPALS AND PRESIDENTS

Campus Beautification Criteria	No value	Low value	Moderate value	High value
<u>Design Concept</u>				
1. The design concept should inspire an academic attitude . . .	0	2.2	44.1	52.7
2. The design concept should be developed and guided by a committee and applied by policy . . . . .	3.2	13	56.9	25.8
3. The design concept should be a unique expression of the educational facility . . . . .	0	10.8	44.1	44.1
4. A fundamental design concept is basic for the planning of campus beautification . . . . .	0	7.5	22.6	68.8
5. A vital, functioning landscape should transcend mere decoration . . . . .	0	3.2	43.0	50.5
6. The basic design concept should reflect an SDA life-style .	5.4	8.6	39.8	43.0
7. The design concept should include easy circulation throughout the campus . . . . .	0	0	17.2	81.7
8. The design concept should agree with culture and location	1.1	4.3	31.2	62.4
9. Signs should be coordinated, both in materials and placement	1.1	2.2	34.4	61.3
10. Lighting for safety and beauty should be part of the design concept . . . . .	0	1.1	8.6	89.2

TABLE 35-Continued

Campus Beautification Criteria	No value	Low value	Moderate value	High value
<u>Atmosphere/Environment</u>				
1. The atmosphere should provide one with a sense of place . .	4.3	3.2	37.6	49.5
2. The atmosphere should strengthen the morals of students . .	0	2.2	25.8	69.9
3. The atmosphere should give a feeling of peacefulness . . . .	1.1	5.4	34.4	58.1
4. The atmosphere should provide an opportunity for spiritual renewal . . . . .	0	2.2	24.7	72.0
5. A variety of atmospheres should promote different types of activities . . . . .	0	11.8	40.1	45.2
6. A sequence of spaces should be planned which create atmospheres that equate to expectations . . . . .	2.2	18.3	50.5	25.8
7. The atmosphere should have a welcoming effect on visitors .	0	0	18.3	80.6
<u>Aesthetics</u>				
1. The aesthetics of the campus should provide a feeling of belonging . . . . .	1.1	1.1	31.2	65.6
2. The aesthetics of the campus should give the students a secure feeling . . . . .	1.1	0	30.1	67.7
3. The aesthetics should encourage the students to have pride of place . . . . .	0	1.1	10.8	87.1

TABLE 35-Continued

Campus Beautification Criteria	No value	Low value	Moderate value	High value
4. An attractive landscape should give one a sense of well being . . . . .	2.2	2.2	35.5	58.1
5. An attractive landscape should provide an aesthetic appeal to faculty and students to encourage school support . . . .	1.1	2.2	19.4	76.3
6. The aesthetics should reflect the building styles and the neighborhood . . . . .	4.3	15.1	47.3	32.3
<u>The Framework</u>				
1. A dynamic master plan should be used to guide campus development . . . . .	0	2.2	32.3	64.5
2. Quality landscaping is necessary for a positive first impression . . . . .	0	0	14.0	85.0
3. The campus should be large enough for adequate spacing of buildings and future expansion . . . . .	0	4.3	21.5	73.1
4. The campus should be well developed with good soil and proper drainage . . . . .	0	6.5	23.7	67.7
5. The school should have a representative sign and entrance which designates it as an SDA institution . . . . .	0	0	16.1	82.8
6. Areas for community use should be included in the landscape plan . . . . .	0	29.0	44.1	25.8
7. The promotion of health and the avoidance of safety hazards should be given high priority . . . . .	0	0	15.1	82.8

TABLE 35-Continued

Campus Beautification Criteria	No value	Low value	Moderate value	High value
8. Natural areas should remain untouched for wildlife study . .	3.2	15.1	53.8	26.9
9. A sufficient water supply should be available for the care of all vegetation . . . . .	0	3.2	28.0	65.6
<u>The Importance of Landscaping</u>				
1. The landscape should provide physical beauty for one to see and appreciate one's surroundings . . . . .	0	3.2	19.4	75.3
2. Creativity should be used in developing special spaces for a sense of spiritual growth . . . . .	1.1	6.5	32.3	59.1
3. Flower gardens should be an essential part of landscaping .	0	15.1	32.3	50.5
4. Rivers, streams, small ponds, waterfalls, and/or fountains could be used to enhance the landscape . . . . .	0	22.6	49.5	22.6
5. A variety of seasonal colors could be incorporated in the landscape . . . . .	4.3	11.8	52.7	30.1
6. The landscape should play a part in teaching about the dignity of life . . . . .	3.2	10.8	47.3	37.6
7. Divisions, such as walls, shrubs, and low fences, could be used to separate special areas in the landscape . . . . .	2.2	19.4	54.8	22.6
8. Outdoor spaces should be used to supplement teaching/learning areas . . . . .	3.2	15.1	43.0	37.6



TABLE 35-Continued

Campus Beautification Criteria	No value	Low value	Moderate value	High value
9. Design topography should determine the location of trees, shrubs, plants, sculptures, gardens, grottos, and recreation areas that fit the master plan . . . . .	0	8.6	35.5	53.8
10. Some walks, paths, and trails could be used for relaxing and meditating . . . . .	2.2	11.8	53.8	32.3
11. Parking lots, drives, and sidewalks should be designed to blend with the landscape . . . . .	0	5.4	45.2	49.5
12. Tennis courts, fieldtracks, ballfields, and other recreation areas should be designed to blend with the landscape . . . .	1.1	8.6	53.8	36.6
13. Buildings and landscape should blend with the natural landscape . . . . .	0	12.9	51.6	35.5
<b><u>Responsibility</u></b>				
1. The chief administrator should be responsible for the promotion of beauty on the campus . . . . .	1.1	7.5	37.6	53.8
2. The board should support administrative action to beautify the campus . . . . .	1.1	3.2	20.4	75.3
3. A landscape architect consultant could be employed to enhance campus beautification . . . . .	2.2	18.3	44.1	34.4
4. The grounds department should be primarily responsible for the upkeep of the campus . . . . .	0	3.2	26.9	70.0

TABLE 35-Continued

Campus Beautification Criteria	No value	Low value	Moderate value	High value
5. Faculty, staff, students, and community should be involved in the beautification of the campus . . . . .	3.2	7.5	48.4	40.1
6. The advice of faculty, staff, students, and community should be considered by the administration for better campus development . . . . .	0	2.2	45.2	52.7
<u>Maintenance</u>				
1. A budget should be developed and funds set aside for campus upkeep . . . . .	0	0	17.2	82.8
2. A regular maintenance schedule should be developed to ensure the campus is cared for . . . . .	0	0	18.3	81.8
3. An attractively designed campus might increase adjacent property value . . . . .	3.2	11.8	35.5	49.5
4. An endowment should be set up for a continual source of funds for campus beautification . . . . .	5.4	25.9	26.9	40.1

Summary

The purpose of this chapter was to present and analyze data gathered in a survey of SDA academy principals and SDA college presidents in North America. The data yielded information about the value each principal and president placed on specific areas of campus beautification.

The information gathered provided a basis for recommendations for proposed campus beautification for Seventh-day Adventist academies and colleges in North America. The recommendations for campus beautification guidelines are presented in Chapter 5.

## CHAPTER V

### CAMPUS BEAUTIFICATION GUIDELINES WITH SPECIAL REFERENCE TO SEVENTH-DAY ADVENTIST ACADEMIES AND COLLEGES IN NORTH AMERICA

This chapter describes the guidelines for campus beautification developed for this study. The bases for the guidelines are outlined, the process of their evaluation and validation is explained, and the suggested guidelines are presented.

#### The Basis for Campus Beautification Guidelines

The guidelines for campus beautification with special reference to academies and colleges were developed on the basis of:

1. Concepts gathered from literature regarding campus beautification in academies and colleges.
2. Data gathered from the state departments of education which had published guidelines concerning campus beautification.
3. Ideas gained from personal contact with educators particularly concerned with landscape architecture.

In an effort to synthesize the data gathered from the 33 states having campus beautification guidelines, a master sheet was developed which contained all elements listed by

state. After tabulating those items for which each state made provision in its guidelines, a table was produced giving the significant elements. This table (34) is found and described in Chapter 4.

#### Modification of the Guidelines

Careful analyses were conducted from the evaluation received from the principals of academies and presidents of colleges. Modifications were made to the guidelines based on the evaluation of the principals and presidents and proposed guidelines for campus beautification were developed. Modifications from the original guidelines were made in two sections of the guidelines, design concept and the environment. These changes are reflected in A-3 which concerns a unique expression of the educational facility, A-6 an SDA lifestyle, B-1 sense of place in the environment, and B-2 the environment and the morale of the students. These changes are shown as proposed guidelines for campus beautification for SDA academies and colleges in North America in Appendix H.

On January 8, 1991, a cover letter, along with the proposed campus beautification guidelines, and an evaluation sheet were sent to a panel of judges for their validation and comments. The director of education for North America and the directors of education for each of the SDA Unions made up the panel. (A list of the judges

can be found in Appendix E. A copy of the evaluation sheet is shown in Appendix G.)

One hundred percent of the judges responded and all of them indicated that they believed that in general these guidelines meet the criteria for campus beautification in SDA academies and colleges in North America.

For the first response on the evaluation sheet (I feel that the guidelines are useful and adequate to help SDA academies and colleges develop their campuses), nine of the ten directors responded yes, and one responded uncertain. For the second response (I feel that the guidelines, if followed, would improve the planning and development of SDA academies and colleges in my area), eight of the ten directors responded yes and two responded uncertain.

Narrative responses given by panel members indicated support or suggested modifications to the proposed campus beautification guidelines. A few are quoted, but anonymity is practiced in order to maintain the confidentiality of the members of the panel. Comments noted under strengths in the guidelines included:

Good Organization. All major areas are covered. Good integration of the spiritual value of a beautiful campus. I applaud your efforts.

You have touched on several areas that need -- demand -- attention. Many of the items mentioned could be supported by E. G. White statements.

Detailed and covers all aspects.

Covered the scope -- seems to be broad guidelines that would be valuable to any school.

Complete planning process.

The guidelines call for planning. An attempt seems to be made for the total campus to fit within the community. The campus is made for the students not students for the campus.

I appreciate the thought gone into this document. It would be especially good for developing new academies.

Comments noted under weaknesses in the guidelines are:

Finances are the major problem.

A lot of what should and not much how to.

Seems to be too general -- most of the guidelines could apply to any situation and some are not totally clear. Example -- The design concept should inspire an academic attitude. Can we measure an academic attitude? I assume you are referring to a place conducive to study?

There needs to be a guideline that plantings should be considered that are low-maintenance. Items D-6 and E-4 are not practical; E-4 creates problems.

The proposed guidelines were modified to incorporate the suggestions of the panel of judges. Modifications were made to A-1 concerning an academic attitude, D-6 community use of the campus, E-4 concerning rivers, streams, small ponds, waterfalls, and/or fountains. G-3 was added at the suggestion of the dissertation committee to include student labor. G-5 was added to include low maintenance plantings.

In addition to these changes, phrases that caused confusion or those that were not clear to the principals, presidents, or directors were reworded for clarification. Notes on the proposed guidelines for campus beautification are introduced here to clarify the criteria developed.

### Notes on the Guidelines

The first part of this section explains each of the seven parts of the guidelines. In addition to this explanation there is a second section which has additional notes concerning several aspects of the guidelines which are based on experience and observation.

#### Part A: The Design Concept

The desire to have a beautiful campus is the desire for everyone concerned. It cannot become a reality until the administration realizes the importance and far-reaching implications of a beautiful campus. Thus the design concept is placed at the top of the guidelines. The administrator, usually the principal of the academy or the president of the college, should provide a vision of what can be done to improve the appearance of the campus. This concept (or vision) should include all aspects of campus design. Therefore, it is necessary for the administrator to seek help from other administrators, faculty, grounds personnel, students, and people in the community.

The concept should reflect the ideals of organization and present a clear statement to the general public about the educational facility. This concept should be developed as part of a master plan and consultation could be sought from landscape architects.



### Part B: The Environment

According to Webster (1965), the environment is everything around one that influences the life of an individual or community. The environment, to some degree, should provide surroundings that aid in developing a scholastic atmosphere for a school. This environment should help in the development for the morale, peacefulness, and spiritual renewal for the campus family.

### Part C: The Aesthetics

Aesthetics is concerned with the characteristics of beauty. It can give one a sense of self-respect and admiration for the school and its surroundings.

### Part D: The Framework

The framework is the structure that gives support to the various aspects of campus beautification as outlined in the master plan. A landscape architect can aid in the development which might include such things as site plans, landscaping, plantings, drainage, signs, roads, natural areas, and the distribution of utilities.

### Part E: The Landscaping

The landscape is a vital element of campus beautification as it provides an opportunity to develop the various aspects in keeping with the design concept. It provides a means to accommodate the framework in a natural, clean, and well-maintained atmosphere.

#### Part F: The Responsibility

Responsibility for the promotion of campus beautification falls on the administrators, for it is part of their work to develop the campus to its potential. In recent years it has become a major concern for the administrator because of the influence campus beautification has on the enrollment and on the quality of students that attend the institution.

This responsibility is shared by the board of trustees, the other administrators, the faculty, staff, students, grounds personnel, and community. A committee which has representatives from these areas can give advice and guidance to the administrators for campus beautification.

#### Part G: The Maintenance

All of the planning, committee work, policies, and master plans will mean little if the grounds are not properly maintained. Maintenance is a major problem because of the expense involved in the hiring of workers to keep the campus looking its best. Low-maintenance plants and shrubs should be used. Underground watering systems (though costly initially) are less expensive in the long run. A regular maintenance schedule can reduce wasted time and, if at all possible, an endowment should be set aside for the maintenance of the grounds.

### Additional Notes

There are additional notes, based on experience and observation, and, in conjunction with this study, that are given here.

The location of the school influences campus beautification. The guidelines presented here are designed more for the traditional campus located in the country with an abundance of land. The campus located in a mountainous or hilly environment will need to use a different approach to campus beautification than the campus that is built where it is flat. The climate will also need to be considered when planning because of the extremes in temperatures. Some trees and plants will survive cold weather better than others. The location of the school is also important. The design will be more open if it is located in the country than if it is located in a city or urban setting.

These guidelines may be modified to meet the needs for campus beautification in other parts of the world field. For the most part the schools in North American have mild to severe winters. In other parts of the world the climate may be warm year round, thus, influencing the growing season and the type of plants used on the campus. The annual rainfall will also be a factor in some areas.

There are challenges facing educational institutions in regard to campus beautification that may necessitate a

change in philosophies. It seems that in the past, if budget cuts were made, they were made to the maintenance areas of the campus. Enrollment and quality of students may be affected by the appearance of the campus. Therefore, it will be necessary to place the appearance of the campus near the top of the list as an important factor in quality education.

These guidelines will be most useful in the development of a new campus. It is more difficult to implement these guidelines into an existing campus, however, there are numerous elements that can be implemented at any time in the development of a campus. Changes can be done gradually by replacing trees, shrubs, flowers, walks, lawns, lighting, and other elements of campus beautification to produce the desired effect for the campus.

From the responses of the panel of judges, it appears that the major concern is not the quality of the guidelines, but how to implement them with the least expense. While guidelines are intended to be the ideal and may not be achieved on every campus, they can be used as a guide for developing a campus as funds become available.

The following steps provide a logical process in the implementation of these guidelines. The first step is for the administrator to set up a committee to develop a philosophy and mission for beautification in keeping with

that of the organization. Individuals such as a landscape architect or any other person from the faculty or community who has an interest in campus beautification should be involved as members of this committee.

The second step would be for the committee to develop parameters (in keeping with the philosophy) as to what should be included in campus beautification. How much should be developed as gardens, lawns, and similar spaces and how much should be left in its natural state. The committee should also develop the mission or purpose which should seek to foster attention toward aesthetics and what is beautiful.

The third step would be to develop a design concept and Booth (1983) helps by providing the process for this step. Booth pointed out that the primary components that should be considered in the implementation are landform, buildings, pavement, site structures, plant materials, and water.

Booth defines landform as being synonymous with topography which relates to the three-dimensional relief of the lay of the land and supports and unites all other components. It includes such factors as views, drainage, and spatial character. Landform is the starting point for the development toward the desired results. Unity, balance, proportion, and variety are key design principles which should be kept in mind when working with landform.

Booth stated that buildings may be treated as either single objects of individual significance or as clusters of objects surrounding an area such as a quadrangle or other enclosed areas. Building masses usually establish fixed, spatial limits in the organization of outdoor functions and activities. Therefore, it is necessary to visually and functionally coordinate a building or buildings with its site by proper treatment of the surrounding landform, repetition of materials, plan arrangement of the buildings, and transition spaces at building entrances.

Pavement is an element on the ground plane used to direct movement and in contrast to landform is flat, fixed, and durable. It supports human and vehicular functions of intense use. It also can influence perceived scale, provide unity, and impress spatial character. Pavement fulfills both aesthetic and utilitarian functions by its color, texture, pattern and stability. Because of its wide range of uses, a great deal of thought should be given to the choice of pavement material before implementation. Whatever pavement material is used, it should be coordinated with all other elements of the design.

Site structures are constructed elements related to the ability of people to use the outdoor environment of the campus conveniently. Ramps, steps, benches, bridges, walls, and fences contribute to the comfort and safety of the people. These site structures reinforce the spatial

and functional organization provided by landform, buildings, and plant materials.

Choosing the right plant materials for hardiness and design is necessary for proper implementation. Plant materials provide the aspect of life in the landscape. They are living elements that grow and change with time. Their soft, irregular shape, along with their color provide a habitable feeling in the outdoor environment. Plant materials serve numerous functions. They define space, clean the air, stabilize the soil, and act as important visual elements based on their size, color, form, and texture. Plant materials should be studied early in the design process as an integral element with landform, buildings, pavement, and site structures.

Finally, water, a special unique feature which has the ability to attract people can be used in a variety of ways. It may be used to calm the senses of sight and sound or it may be employed as a dynamic element of motion. Water is also a life-giving element that helps to provide a feeling of vitality and is a necessary element in the implementation of these guidelines.

The fourth step is to develop a budget which reflects the amount of money expected to be spent and the source of income. It is suggested that the implementation be done in phases with a time-table for definite goals. It is also suggested that an endowment fund be established early so

that recurring funds will be available for maintenance and up-keep.

The crucial final step is to put these plans into action. This may be done on a small scale at first, but should be accomplished as fast as possible. This may include the employment of a contractor or it may be accomplished through the grounds department with the use of student labor.

In addition to these primary components, a distinctive quality to keep in mind is that the landscape has both utilitarian and aesthetic uses. The goal is to utilize the design media in a manner that is practical while at the same time visually inspiring. These design elements should be applied collectively in a design. The implementation of these guidelines should sensitively unite people with the outdoor environment making life a beautiful experience.

Campus Beautification Guidelines with Special Reference to SDA Academies and Colleges in North America

The final guidelines for campus beautification with special reference to SDA academies and colleges in North America as developed by this study, are shown in Table 36.



TABLE 36

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Campus Beautification Guidelines with Special  
Reference to SDA Academies and Colleges  
in North America

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A. THE DESIGN CONCEPT

1. should provide a place conducive to study. (It should be a place where a person feels like he/she is in an academic environment -- which can be partially done through the use of stately trees, pretty flowers, and manicured lawns. When a person walks on a campus, he/she should feel that this is a place where serious learning takes place.)
2. should be developed by the administration, faculty, students, and grounds personnel. A policy should be developed for guidance; and a committee established to carry out those policies.
3. should be a statement to the general public that the structure is an educational facility.
4. should be carefully planned before any campus beautification is put into operation.
5. should be considered more than decoration -- it should be simple but functional.
6. should reflect the philosophy of the institution. (This means that campus beautification will reflect a modest but attractive appearance and avoid the ornate and extravagant.)
7. should include easy circulation for pedestrians and vehicles (where appropriate) on campus.
8. should agree with the culture and location. (Plantings should be of local variety that are easy to care for and that blend with the architecture style.)
9. should include location and directional signs that are coordinated, both in materials and placement.
10. should include lighting for safety and beauty.

**B. THE ENVIRONMENT**

1. should provide the school family and community with a feeling of pride for the institution.
2. should provide the opportunity for strengthening the morale of the students and faculty. (A person working in a clean and beautiful environment performs positively.)
3. should give a feeling of peacefulness. (More learning takes place in an atmosphere where there are fewer distractions.)
4. should provide an opportunity for spiritual renewal. (On an SDA campus there should be places where students and teachers can meditate and be close to nature.)
5. should promote different types of activities. (Campus beautification should provide opportunity for meditation, circulation, recreation, study, and research.)
6. should have a friendly and welcoming effect on visitors.

**C. THE AESTHETICS**

1. should create an environment that gives a feeling of culture.
2. should give the campus family a feeling of security.
3. should encourage the students to have an appreciation of the school.
4. should give one a sense of well being.
5. should inspire faculty and students to give support for the school.
6. should pleasantly blend with the building styles and architecture.

**D. THE FRAMEWORK**

1. should be a part of a master plan to be used to guide in campus development.

2. should include quality landscaping in order to produce a positive first impression on visitors.
3. should enhance the spacing of buildings and provide for future expansion.
4. should include site plans for plantings appropriate to the soil and drainage.
5. should include representative entrances and signs in keeping with the design concept philosophy.
6. should include areas for community use. (The positive attitude of the community toward the institution could be of great value.)
7. should promote health, and safety from hazards should be given high priority.
8. should include natural areas that provide a habitat for wildlife and provide an opportunity for research.
9. should include a sufficient water supply for the care of all vegetation.

#### E. THE LANDSCAPING

1. should provide physical beauty to please the eye and to encourage appreciation of one's surroundings.
2. should include special locations for meditation and spiritual growth.
3. should include flower gardens, an essential part of landscaping.
4. should include available rivers, streams, small ponds, waterfalls, and/or natural features to enhance the landscape.
5. should include a variety of seasonal colors to be incorporated in the landscape.
6. should aid in the teaching of humans and their relationship with the environment.
7. should include enclosures such as walls, shrubs, and low fences to separate special areas.

8. should provide outdoor spaces to supplement indoor teaching/learning areas.
9. should determine the location of trees, shrubs, plants, sculptures, gardens, grottos, and recreation areas that fit the master plan.
10. should include walks, paths, and trails designed for relaxation and meditation.
11. should include parking lots, drives, and sidewalks designed to harmonize with the landscape.
12. should include recreation areas, tennis courts, fieldtracks, and ballfields designed to blend with the landscape.
13. should merge with the natural landscape.

#### F. THE RESPONSIBILITY

1. should be shared by the chief administrator who is responsible for the promotion of beauty on the campus.
2. should be shared by the board who should support administrative action to beautify the campus.
3. should be shared by faculty, staff, students, and community whose advice should be considered by the administration when formulating plans for better campus development.
4. should be shared by a landscape architect consultant who could be employed to assist with campus beautification.
5. should be shared by the grounds department which is primarily responsible for the upkeep of the campus.
6. should be shared by the faculty, staff, students, and community who should be involved in the campus beautification.

#### G. THE MAINTENANCE

1. should be assured by a budget developed and funds set aside for campus upkeep.

2. should be assured by a regular maintenance schedule.
  3. should be assured by employing students to help with the upkeep.
  4. should be assured by an attractive design which might increase adjacent property value.
  5. should be assured by low maintenance plantings.
  6. should be assured by an endowment set up as a continual source of funds for campus beautification.
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#### Summary

Chapter 5 describes both the proposed guidelines for campus beautification and the final campus beautification guidelines developed for this study. The bases for the guidelines are outlined and the process of their validation is explained.

The selected panel of judges gave general approval to the proposed guidelines with nine out of ten expressing that the guidelines would be useful and adequate to help academies and colleges develop their campus. Eight out of ten felt the guidelines would improve the planning and development of academies and colleges in their area. Modifications were made to the guidelines reflecting the recommendations from the panel of judges.

## CHAPTER VI

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### Summary

The purpose of this study was to develop campus beautification guidelines with special reference to Seventh-day Adventist academies and colleges in North America. In order to provide a practical basis for campus beautification guidelines, literature was reviewed to determine what has been written on campus beautification. Research was also conducted to discover the guidelines most practical for academies and colleges. The criteria and standards of the states which had published guidelines relative to campus beautification were identified.

During the review of the literature sufficient information was found to support the concept of providing a beautiful campus. However, comparatively few documents dealing specifically with guidelines for campus beautification were found, and fewer still related to the Seventh-day Adventist school system.

In evaluating the criteria for campus beautification from the 50 states, it was established that 33 of the states had criteria for school sites and development. The

other 17 states used adjacent state criteria or did not have any. Most of the criteria were consistent among the states. However, a few did have some additional criteria such as using the landscape as part of the curriculum and involving the students, faculty, and community in the beautification process.

An analysis of the beautification criteria assembled from the states produced data which allowed the researcher to conclude which criteria were considered significant for this study. This information, along with suggestions from professional associations and universities and information from the members of the dissertation committee was used to develop a four-page, 55-item guideline.

The guidelines were sent to all of the principals of SDA academies and presidents of SDA colleges in North America. After 93 of the 105 guidelines were returned (89%), a careful analysis was conducted, and from the comments of the principals and presidents, modifications were made to produce proposed guidelines for campus beautification.

The proposed set of guidelines was then sent to a panel of ten judges. All of the judges responded and from their comments and suggestions, the guidelines for campus beautification were produced.

### Conclusions

Based on the review of literature surveyed, information gathered, and experience gained within the limitations of this study, the following conclusions were drawn.

Responses from the principals, presidents, and union directors supported the idea of guidelines for campus beautification in SDA academies and colleges in North America. Most of the states had specific guidelines for campus development which demonstrates the significance placed on campus beautification from the public education systems. Seventh-day Adventists schools are not required to follow the guidelines produced by the states, but they do cover areas of campus development that can be applied and modified to meet the needs of the campus. The guidelines developed would give direction for campus beautification to the administrator allowing him/her to start and maintain a beautification program. Although these guidelines were validated for use in SDA academies and colleges, they are not limited to these institutions. Other colleges and secondary schools will also find them useful.

Four questions were raised in the purpose of the study. The first question related to campus beautification and the education process. Several articles identified that a relationship existed and indicated that campus



beautification affected students' attitudes in a positive way toward the school and resulted in better attendance and a higher value on education.

Responses from principals and presidents indicated strong support for this concept. Ninety-seven percent of those who responded (by selecting a moderate value or a high value from the guidelines) were in favor of a design concept which would inspire an academic attitude.

Students often choose a school because of its appearance, especially during their first visit to the campus. The appearance of the grounds tend to support or negate the purpose and philosophy of the institution. It seems to produce a sense of pride, loyalty, or attachment to the school. Thus, the appearance of the grounds becomes a major factor in school recruitment, positive attitudes, better attendance, and a higher value placed on education.

Ninety-five percent of the principals and presidents who responded (by selecting a moderate or a high value) were in favor of a campus which had a variety of atmospheres. Spaces could be created which foster different kinds of atmospheres for various kinds of activities and extensions of the classroom. There could be areas developed for public meetings such as an amphitheater for outdoor programs, or more formal spaces could be used for public meetings, such as graduations. Natural areas could be developed for nature study, providing opportunity

for research. Spaces could be set aside for meditation and spiritual renewal, while other areas could be designated for recreation and sports. Thus, the campus could be utilized in smaller parts to enhance particular activities.

The second question was related to how the school grounds could be made more beautiful. For the administrator this was the "how to" of campus beautification, and as determined by the responses from the guidelines, 99% of the principals and presidents who indicated (by selecting a moderate or a high value) that quality landscaping was necessary for providing a suitable first impression of the campus.

It is easier to present ideas about campus beautification than to actually develop them. However, there are elements that can be used to achieve this end, one of which is unity. Unity can be achieved by planting compatible kinds of trees, shrubs, flowers, and lawns to create a harmonious effect.

Similar light fixtures, directional signs, seating, trash containers, and paving can add to the unity of the campus. Sidewalks should be constructed according to the flow of traffic utilizing stone, concrete, blacktop, brick, or bark in order to blend with building style.

The main entrance of the campus can receive special attention, since it usually presents a statement to the general public and gives a first impression to the

visitors. Formal or informal design can be used, although research seems to indicate that a formal design is usually preferred in front of large structures such as an administration building. This can be accomplished by interspersing large, well-formed trees with smaller trees or shrubs and flowers creating a point of symmetry. A more detailed account of implementation is given in the additional notes section in chapter five.

The third question concerned the responsibility of the administration toward campus beautification. Ninety percent of the principals and presidents responding (by selecting a moderate or a high value) agreed that the promotion of campus beautification lay with the administrator. It is a complex process which requires the input from faculty, grounds personnel, the community, students, and possibly a landscape architect. However, the ultimate responsibility for the image, appearance, and upkeep of the campus rests upon the administrator, who can provide direction to achieve a properly planned, developed, and well-maintained campus.

The fourth question was related to how campus beautification could be achieved within a limited budget. Ninety-nine percent of the principals and presidents who responded indicated (by selecting a moderate or a high value) that it was necessary to develop a budget for campus beautification and upkeep. To maintain the quality needed

for an educational facility administrators can demonstrate their ability to obtain maximum benefits from available resources.

Including a budget for campus beautification is a vital step toward providing finances for developing the campus and providing for maintenance upkeep. Planting low-cost, low-maintenance trees, shrubs, and flowers, and avoiding excessive ornamentation planting decreases cost. Using labor-saving devices (such as large mowers) and systematizing maintenance will aid in reducing expenses.

A comprehensive plan of controlling expenses can include a financial schedule showing the necessary work to be done over a period of time. The manager of the grounds plays a vital role in cost control of campus beautification. Such a person could be able to reduce the cost of campus beautification by designing, constructing, and maintaining those elements used in landscaping.

Campus beautification requires considerable handwork and use of equipment, depending on the size of the grounds and the number of staff. Each campus should be surveyed on the basis of its own needs and desired program, but reductions in staff and the use of better equipment may reduce cost. In one assessment, it was estimated that from 1% - 4% of the budget for the school should be spent on campus beautification.

The establishment of an endowment could create a better financial situation in that recurring funds would be available for campus beautification and upkeep. Sixty-seven percent of the principals and presidents who responded (by selecting a moderate or a high value) indicated that an endowment should be established.

### Recommendations

Based upon the findings of this study, the following recommendations are presented for consideration and possible further research.

The guidelines developed in this study could be adapted and modified to meet the specific needs of a particular campus. A master plan could be developed for a college or an academy utilizing these guidelines for campus beautification.

Short training courses or seminars could be developed to prepare Seventh-day Adventist educators and others concerned in the developing of specifications for campus beautification in Seventh-day Adventist educational institutions.

A research field experience or project could be developed by testing these guidelines for campus beautification in an actual campus development project and then making the necessary modifications for that particular situation.

Similar studies for campus beautification could be conducted in other divisions within the Seventh-day Adventist church. These guidelines could be modified to meet the situation of other academies or colleges which have different climates, temperatures, growing seasons, and plants.

A budget could be developed for creating a campus in which the elements and concepts of these guidelines are used. Estimating the expenses involved in developing, implementing, and maintaining a campus with the characteristics presented in these guidelines could be helpful. Different phases and timetables for completion could also be included in the study.

## **APPENDIXES**

## **APPENDIX A**

### **The Campus Beautification Guidelines Sent to the Principals and Presidents**



# Campus Beautification Guidelines

**Directions:**

The following criteria have been developed from materials that were provided by educational superintendents from each of the fifty states, landscape architects, and professional organizations. Would you as an administrator, please indicate the value of each item, as you see it, as it relates to Seventh-day Adventist educational facilities. Please place an [X] in the box under the appropriate term.

**Explanation of terms in the rating scale:**

No value            - Undesirable  
 Low value         - Unnecessary  
 Moderate value   - Desirable  
 High value        - Very desirable

	No value	Low value	Moderate value	High value
<b>A. DESIGN CONCEPT</b>				
1. The design concept should inspire an academic attitude . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The design concept should be developed and guided by a committee and applied by policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The design concept should be a unique expression of the educational facility . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. A fundamental design concept is basic for the planning of campus beautification . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. A vital, functioning landscape should transcend mere decoration . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The basic design concept should reflect an SDA life style . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The design concept should include easy circulation throughout the campus . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The design concept should agree with the culture and location . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Signs should be coordinated, both in materials and placement . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Lighting for safety and beauty should be part of the design concept . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>B. ATMOSPHERE/ENVIRONMENT</b>				
1. The atmosphere should provide one with a sense of place . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The atmosphere should strengthen the morale of the students . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	No value	Low value	Moderate value	High value
3. The atmosphere should give a feeling of peacefulness . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The atmosphere should provide an opportunity for spiritual renewal . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. A variety of atmospheres should promote different types of activities . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. A sequence of spaces should be planned which create atmospheres that equate to expectations . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The atmosphere should have a welcoming effect on visitors . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 C. AESTHETICS				
1. The aesthetics of the campus should provide a feeling of belonging . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The aesthetics of the campus should give the students a secure feeling . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The aesthetics should encourage the students to have pride of place . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. An attractive landscape should give one a sense of well being . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. An attractive landscape should provide an aesthetic appeal to faculty and students to encourage support for the school . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The aesthetics should reflect the building styles and the neighborhood . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 D. THE FRAMEWORK				
1. A dynamic master plan should be used to guide campus development . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Quality landscaping is necessary for a positive first impression . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The campus should be large enough for adequate spacing of buildings and future expansion . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The campus should be well developed with good soil and proper drainage . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	No value	Low value	Moderate value	High value
5. The school should have a representative sign and entrance which designates it as an SDA institution . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Areas for community use should be included in the landscape plan . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The promotion of health and the avoidance of safety hazards should be given high priority	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Natural areas should remain untouched for wildlife and study . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. A sufficient water supply should be available for the care of all vegetation . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>E. THE IMPORTANCE OF LANDSCAPING</b>				
1. The landscape should provide physical beauty for one to see and appreciate one's surroundings . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Creativity should be used in developing special spaces for a sense of spiritual growth . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Flower gardens should be an essential part of landscaping . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Rivers, streams, small ponds, waterfalls, and/or fountains could be used to enhance the landscape . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. A variety of seasonal colors could be incorporated in the landscape . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The landscape should play a part in teaching about the dignity of life . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Divisions, such as walls, shrubs, and low fences could be used to separate special areas in the landscape . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Outdoor spaces should be used to supplement teaching/learning areas . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Design topography should determine the location of trees, shrubs, plants, sculptures, garden, grottoes, and recreation areas that fit the master plan . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	No value	Low value	Moderate value	High value
10. Some walks, paths, and trails could be used for relaxing and meditating . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Parking lots, drives, and sidewalks should be designed to blend with the landscape . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Tennis courts, fieldtracks, ballfields, and other recreation areas should be designed to blend with the landscape . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Buildings and landscape should blend with the natural landscape . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>F. RESPONSIBILITY</b>				
1. The chief administrator should be responsible for the promotion of beauty on the campus .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The board should support administrative action to beautify the campus . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. A landscape architect consultant could be employed to enhance campus beautification .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The grounds department should be primarily responsible for the upkeep of the campus . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Faculty, staff, students, and community should be involved in the beautification of the campus . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The advice of faculty, staff, students, and community should be considered by the administration for better campus development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>G. MAINTENANCE</b>				
1. A budget should be developed and funds set aside for campus upkeep . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. A regular maintenance schedule should be developed to ensure the campus is cared for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. An attractively designed campus might increase adjacent property value . . . . .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. An endowment should be set up for a continual source of funds for campus beautification .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## **APPENDIX B**

### **The Letter Sent with the Guidelines**



[ 178 ]

## ANDREWS UNIVERSITY

October 10, 1990

Dear Administrator:

I am a doctoral student in the School of Education at Andrews University working on developing guidelines for campus beautification for SDA colleges and academies. I believe that the impressions, feelings, and attitudes attained from a beautiful campus are important.

The way educational facilities are presented to students, faculty, staff, and community as a first impression is one that in many cases is a lasting impression. Therefore, I am sure you will agree with me that campus beautification is a very vital part of administration.

My doctoral dissertation is designed to help SDA administrators plan for more beautiful campuses. I plan to develop campus beautification guidelines for Seventh-day Adventist educational administrators so they can develop their campus to its fullest.

Enclosed you will find a set of guidelines that have been developed to help give me direction concerning what areas are most important. Please take a few minutes of your time to choose a response for each item. Feel free to add comments wherever you feel it appropriate. After you have completed the guidelines, slip it into the stamped, self-addressed envelope and mail it. All responses will be treated as confidential, and no names of schools or administrators will be used.

Thank you very much for your time and help.

Sincerely yours,

Larry W. Boughman  
550 Maplewood Apt. C-64  
Berrien Springs, MI 49103

Dr. Edward Streeter, Chairman  
Educational Administration  
Andrews University

## **APPENDIX C**

### **List of States Having Published Campus Beautification Guidelines**

STATES HAVING PUBLISHED  
CAMPUS BEAUTIFICATION GUIDELINES

1. Alabama
2. Alaska
3. Arkansas
4. California
5. Connecticut
6. Delaware
7. Florida
8. Georgia
9. Hawaii
10. Idaho
11. Illinois
12. Indiana
13. Iowa
14. Kentucky
15. Maine
16. Maryland
17. Massachusetts
18. Michigan
19. Minnesota
20. Mississippi
21. Montana
22. New Hampshire
23. New Jersey
24. New York
25. North Carolina
26. Pennsylvania
27. Tennessee
28. Vermont
29. Virginia
30. Washington
31. West Virginia
32. Wisconsin
33. Wyoming



## **APPENDIX D**

### **List of States Without Published Campus Beautification Guidelines**

STATES WITHOUT PUBLISHED  
CAMPUS BEAUTIFICATION GUIDELINES

1. Arizona
2. Colorado
3. Kansas
4. Louisiana
5. Missouri
6. Nebraska
7. Nevada
8. New Mexico
9. North Dakota
10. Ohio
11. Oklahoma
12. Oregon
13. Rhode Island
14. South Carolina
15. South Dakota
16. Texas
17. Utah

## **APPENDIX E**

### **List of The Panel of Judges**

UNION CONFERENCE DIRECTORS OF EDUCATION  
NORTH AMERICA DIVISION

Gilbert Plubell . . . . . North American Division  
12501 Old Columbia Pike  
Silver Spring, MD 20904 - 6600

Paul Kilgore . . . . . Atlantic Union  
P.O. Box 1189  
South Lancaster, MA 01561-1189

Janice Saliba . . . . . Canadian Union  
1148 King Street  
East Oshawa,  
Ontario, Canada

Richard C. Osborn . . . . . Columbia Union  
5427 Twin Knolls Road  
Columbia, Maryland 21045

Frederick R. Stephan . . . . . Lake Union  
P.O. Box C  
Berrien Springs, MI 49103

Melvin E. Northrup . . . . . Mid America Union  
P.O. Box 6128  
Lincoln, NE 68506

Don R. Keele . . . . . North Pacific Union  
P.O. Box 16677  
Portland, OR 97216

Gerry E. Thompson . . . . . Pacific Union  
P.O. Box 5005  
Westlake Village, CA 91359

James Epperson . . . . . Southern Union  
P.O. Box 849  
Decatur, GA 30031

Frances Clark . . . . . Southwestern Union  
P.O. Box 4000  
Burleson, TX 76028

## **APPENDIX F**

### **The Letter Sent to the Panel of Judges**



# ANDREWS

UNIVERSITY

January 8, 1991

Union Directors of Education  
North America

Dear Educator:

I am a doctoral student at Andrews University. My dissertation is focused on developing guidelines for campus beautification for SDA academies and colleges in North America.

A set of guidelines were developed from criteria from the fifty states in the United States that published guidelines, plus careful research of literature, personal contacts with chairs of landscape architecture in several universities, and materials acquired from professional associations. The guidelines were mailed to SDA principals of academies and presidents of SDA colleges in North America asking them to respond by making a value judgment for each of the items. As a result, the modified proposed guidelines are being sent to you for your validation.

Enclosed you will find a copy of the suggested guidelines for campus beautification in SDA academies and colleges in North America. Also you will find a validation sheet for you to fill out.

Please take a few minutes and look over the suggested guidelines and respond on the sheet provided. A stamped self-addressed envelope is enclosed, so that you can return the response sheet to me.

I will greatly appreciate your prompt response.

Cordially yours,

*Larry W. Boughman*

Larry W. Boughman  
Doctoral Candidate

*Dr. E.A. Streeter*

Dr. E.A. Streeter  
Director, Facility Planning  
Laboratory; Chairman of  
Doctoral Committee

## APPENDIX G

### Validation Sheet Sent to the Panel of Judges

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Validation Sheet

After my reading of the guidelines for campus beautification with special reference to Seventh-day Adventist academies and colleges in North America:

1. I feel that the guidelines are useful and adequate to help SDA colleges and academies develop their campuses.

☐

Yes

☐

No

☐

Uncertain

2. I feel that the guidelines, if followed, would improve the planning and development of SDA colleges and academies in my area.

☐

Yes

☐

No

☐

Uncertain

3. I have noted the following strengths in the guidelines:

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---



---

4. I have noted the following weaknesses in the guidelines:

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---



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Signed: \_\_\_\_\_

Date \_\_\_\_\_

Thank you very much for your help.



## **APPENDIX H**

### **Proposed Guidelines Sent to the Panel of Judges**

## **PROPOSED GUIDELINES FOR CAMPUS BEAUTIFICATION WITH SPECIAL REFERENCE TO SDA ACADEMIES AND COLLEGES IN NORTH AMERICA**

The following criteria have been developed for proposed guidelines for campus beautification in SDA academies and colleges.

### **A. DESIGN CONCEPT**

1. The design concept should inspire an academic attitude.
2. The design concept should be developed and guided by a committee and applied by policy.
3. The design concept should be an expression of the educational facility.
4. A fundamental design concept is basic for the planning of campus beautification.
5. A vital, functioning landscape should transcend mere decoration.
6. The basic design concept should reflect an SDA educational institution.
7. The design concept should include easy circulation throughout the campus.
8. The design concept should agree with the culture and location.
9. Signs should be coordinated, both in materials and placement.
10. Lighting for safety and beauty should be part of the design concept.

### **B. ATMOSPHERE/ENVIRONMENT**

1. The atmosphere should provide a person with a sense of place.
2. The atmosphere should provide the opportunity for strengthen the morale of the students and faculty.

3. The atmosphere should give a feeling of peacefulness.
4. The environment should provide an opportunity for spiritual renewal.
5. A variety of atmospheres should promote different types of activities.
6. A sequence of spaces should be planned which create atmospheres that equate to expectations.
7. The atmosphere should have a welcoming effect on visitors.

#### C. AESTHETICS

1. The aesthetics of the campus should provide a feeling of belonging.
2. The aesthetics of the campus should give the students a secure feeling.
3. The aesthetics should encourage the students to have pride of place.
4. An attractive landscape should give one a sense of well being.
5. An attractive landscape should provide an aesthetic appeal to faculty and students to encourage support for the school.
6. The aesthetics should reflect the building styles and the neighborhood.

#### D. THE FRAMEWORK

1. A dynamic master plan should be used to guide campus development.
2. Quality landscaping is necessary for a positive first impression.
3. The campus should be large enough for adequate spacing of buildings and future expansion.
4. The campus should be well developed with good soil and proper drainage.

5. The school should have a representative sign and entrance which designates it as an SDA institution.
6. Areas for community use should be included in the landscape plan.
7. The promotion of health and the avoidance of safety hazards should be given high priority.
8. Natural areas should remain untouched for wildlife and study.
9. A sufficient water supply should be available for the care of all vegetation.

#### E. THE IMPORTANCE OF LANDSCAPING

1. The landscape should provide physical beauty for one to see and appreciate one's surrounding.
2. Creativity should be used in developing special spaces for a sense of spiritual growth.
3. Flower gardens should be an essential part of landscaping.
4. Rivers, streams, small ponds, waterfalls, and/or fountains could be used to enhance the landscape.
5. A variety of seasonal colors could be incorporated in the landscape.
6. The landscape should play a part in teaching about the dignity of life.
7. Divisions, such as walls, shrubs, and low fences could be used to separate special areas in the landscape.
8. Outdoor spaces should be used to supplement teaching/learning areas.
9. Design topography should determine the location of trees, shrubs, plants, sculptures, gardens, grottos, and recreation areas that fit the master plan.
10. Some walks, paths, and trails could be used for relaxing and meditation.

11. Parking lots, drives, and sidewalks should be designed to blend with the landscape.
12. Tennis courts, fieldtracks, ballfields, and other recreation areas should be designed to blend with the landscape.
13. Buildings and landscape should blend with the natural landscape.

#### F. RESPONSIBILITY

1. The chief administrator should be responsible for the promotion of beauty on the campus.
2. The board should support administrative action to beautify the campus.
3. A landscape architect consultant could be employed to enhance campus beautification.
4. The grounds department should be primarily responsible for the upkeep of the campus.
5. Faculty, staff, students, and community should be involved in the beautification of the campus.
6. The advice of faculty, staff, students, and community should be considered by the administration for better campus development.

#### G. MAINTENANCE

1. A budget should be developed and funds set aside for campus upkeep.
2. A regular maintenance schedule should be developed to ensure the campus is cared for.
3. An attractive designed campus might increase adjacent property value.
4. An endowment should be set up for a continual source of funds for campus beautification.

## **Bibliography**

## BIBLIOGRAPHY

The bibliography is divided into three parts. The first part lists published and unpublished books, reports, papers and periodicals. The second part (State Departments) list each state which had criteria for campus development, and the third part list interviews conducted.

Alaska Department of Education. (1977). Alaska small elementary school program and space guidelines. Juneau: Department of Education; Educational Facilities.

American Association of School Administrators. (1951). School Plant Maintenance. Washington, D.C.: American Association of School Administrators.

American Association of School Administrators. (1960a). Planning America's school buildings. Washington, D.C.: American Association of School Administrators.

American Association of School Administrators. (1960b). Planning the physical environment. Washington, D.C.: American Association of School Administrators.

American Association of School Administrators. (1960c). School Plant Management: Administering the Custodial Program. Washington, D.C.: American Association of School Administrators.

American Association of School Administrators. (1967). Schools of America. Washington, D.C.: American Association of School Administrators.

- Babcock, George. (1979). "Educational facility space guidelines for Seventh-day Adventist schools." Ed.D. dissertation, Andrews University.
- Balmori, Diana. (1985). Beatrix Farrand's American landscapes: Her gardens and campuses. Dexter, Michigan: Thomson-Shore.
- Batey, Mavis. (1989). The historic gardens of Oxford & Cambridge. London: Macmillan.
- Bluford, Vernada. (1988, Fall). Gardeners and groundskeepers. Occupational Outlook Quarterly, 37-39.
- Boot, Martha. (1983). Improvement of school climate. Ridgecrest, California: California School Administrators.
- Booth, Norman K. (1983) Basic elements of landscape architectural design. New York: Elsevier Science Publishing Co., Inc.
- Brewster, Sam F. (1976). Campus planning and construction. Washington, D.C.: Association of Physical Plant Administrators.
- Brickman, Dick. (1982, June). How to cut landscape maintenance cost. American School and University, pp. 28-33.
- Brickman, Dick. (1983, June). Slow mows. American School and University, p. 30.
- Brown, Art. (1983). Campus beautification and school gardening. Lincoln, Nebraska: Department of Education for Mid America Conference of Seventh-day Adventist.
- Brubaker, William. (1972). Facility options. Columbus: Council of Educational Facility Planners.



- Busbee, Cyril B. (no date). Places and spaces for learning-South Carolina. Columbia: South Carolina Department of Education.
- Callahan, Joseph F., & Clark, Leonard H. (1977). Planning for competence: Foundations of education. New York: Macmillan.
- Carnegie Foundation, (1986, January/February). How do students choose a college? Change, pp. 29-32.
- Castaldi, Basil. (1969). Creative planning of educational facilities. Boston: Allyn and Bacon.
- Castaldi, Basil. (1977). Educational facilities planning, remodeling, and management. Boston: Allyn and Bacon.
- Colbert, Charles R., Lowery, Mark P., and Hess, William J. Jr. (1957) An Educational Oasis. Tacoma, Washington: Douglas Fir Plywood Association.
- Conner, Jerry. (1986, February). Landscaping, southern style. American School and University, pp. 15-18.
- Council of Educational Facility Planners International. (1976). Guide for planning educational facilities. Columbus, Ohio: Council of Educational Facility Planners.
- David, Thomas G., & Wright, Benjamin D. (1975). Learning environments. Chicago: University of Chicago Press.
- DiGeronimo, Joe, & Gustafson, George A. (1985, February). Good looks. American School and University, pp. 36-37.
- Dober, Richard. (1989). American landscape architecture. Washington, D.C.: National Trust for Historic Preservation.

- Eckbo, Garrett. (1969). The landscape we see. New York: McGraw-Hill.
- Educational Facilities Laboratories. (1972). Environmental educational facilities resources. New York: Educational Facilities Laboratories.
- Evans, Julie. (1988, November). Alternative landscaping weathered the drought. School and College, pp. 35-38.
- Fairbrother, Nan. (1974). The nature of landscape design. New York: Alfred A. Knopf.
- Figlio, Mary Ellen. (1980, January). The greening of an urban campus. American School and University, pp. 18-20.
- General Conference of Seventh-day Adventist. (1977). Learners Live Here. Washington, D.C.: Department of Education.
- General Conference of Seventh-day Adventist. (1978). North American Division Code, K-12. Washington, D.C.: Department of Education.
- Gibbs, Jamie. (1988) Landscape it yourself, New York: Shadow Lawn Press, Inc.
- Gonzalez, Eduardo A. (1989). Landscaping. Unpublished paper, Andrews University.
- Gould, Bryant, & Finci, David. (1986, April). Site plan: A first step. American School and University, p. 60.
- Green, David. (1983, December). How a principal can make the P.T.O. a gold mine. Executive Educator, pp. 23-24.

- Green, John, & Barber, Allen. (1968) A system of cost accounting for physical plant operations in institutions of higher education. Athens, Georgia: The University of Georgia Press.
- Hallak, Jacques. (1977). Planning the location of schools. Paris: Unesco: International Institute for Educational Planning.
- Hammer, Nelson. (1988, July). Toward a safe, lasting landscape. American School and University, pp. 35-37.
- Hill, Patricia. (1949). Checklist for a healthful and safe school Environment. Sacramento, California: Prepared by a Subcommittee on School Environment of the California State Joint Committee on School Health.
- Jackson, J. B. (1970). Landscapes. Amhurst, Massachusetts: The University of Massachusetts Press.
- Jellico, G. A. (1966), Studies in landscape design. London: Oxford University Press.
- Kerezt, John. (1972, December). Landscape: Designing beauty in the face of change. School Product News, pp. 16-17.
- Kilpatrick, Edward W. (1973). School sites: Selection, development, and utilization. Trenton, New Jersey: Bureau of Facility Planning, New Jersey State Department of Education.
- Knight, Edgar W. (1951). Education in the U.S. (3rd ed.). Boston: Ginn.
- Lees, C. B. (1960). Budget landscaping. New York: Holt.
- Leggett, Stanton. (1983, March/April). Managing facilities creatively. Council of Educational Facility

- Lewis, Preston, & Haque, Mary. (1988, May). Beyond the school room: Stimulating young minds through landscape design. The Agricultural Education Magazine, pp. 19-21.
- Lohmann Karl B. (1941). Landscape architecture in the modern world. Champaign, Illinois: Garrard.
- Lubwana, Hannington A. (1981). Compass concepts: Landscaping. Unpublished paper, Andrews University.
- McMullen, Paul. (1984, February). Selecting the structural elements. Landscaping. pp. 48-79.
- McQuade, Walter. (1958). Schoolhouse. New York: Simon and Schuster.
- Michigan Department of Education. (1975). School plant planning: Handbook. Lansing, Michigan: Department of Education.
- Nyquist, Ewald B. (1975). Planning outdoor physical education facilities. Albany: The University of the State of New York.
- Nyquist, Ewald B. (1975). Manual of planning standards. Albany: The University of the State of New York.
- Nyquist, Ewald B. (1977). Guide to administrative procedures. Albany: The University of the State of New York.
- Pawsey, Murice. (1982, Fall). Providing campus environmental coherence by landscaping. Planning for Higher Education, pp. 25-29.
- Postman, Richard A. (1978). Use of land design. Unpublished paper, Andrews University.

- Roth, Alfred. (1958). The new school. New York: Fredrick Prager.
- Rubenstein, Harvey M. (1969). A guide to site and environmental planning. New York: John Wiley and Sons.
- Schultze, Robert R. (1966). The utilization of building sites of the elementary schools of the Omaha public schools. Dissertation Abstracts International / A27 November, 1235.
- Simonds, John O. (1961). Landscape architecture. New York: F.W. Dodge.
- Sloane, Eric. (1972). The little red schoolhouse. Garden City, New York: Doubleday.
- Southern Union Conference of Seventh-day Adventist. (1982) School gardening and campus beautification. Practical Arts Curriculum Workshop, Southern Missionary College. Decatur, Georgia: Department of Education, Southern Union Conference of Seventh-day Adventist.
- Spalding, Arthur W. (1962). Origin and history of the Seventh-day Adventist, (Vol. 1). Washington, D.C.: Review and Herald.
- State University of New York. (1988). State University of New York Campus Environmental Improvement Program. (2nd ed.). Albany: New York State Department of Education.
- Stern, Robert. (1986). Pride of place. New York: Houghton Mifflin.
- Streeter, Edward A. (1977, April-May). Developing educational specifications. The Journal of Adventist Education, 39, pp. 16-25.

Streeter, Edward A. (1980). Guidelines for developing educational specifications. Washington: North American Division Office of Education - General Conference of Seventh-day Adventist.

Taylor, James L. (1958). School sites. U.S. Department of Health, Education, and Welfare. Washington, D.C.: United States Government Printing Office.

Texas Education Agency. (no date). A format for a set of educational specifications. Austin: Department of Education.

Thacker, Christopher (1979). The history of gardens. Berkeley, California: University of California Press.

Tinglum, Jahn H. (1967). School plant planning. Ashland: State of Wisconsin.

Tonigan, Richard F. (1964). Guide for planning school plants. Detroit, Michigan: National Council on Schoolhouse Construction.

Turner, Paul V. (1984). Campus. Cambridge, Massachusetts: The M.I.T. Press.

Turner, Susan Louise. (1989). American landscape architecture. Washington, D.C.: National Trust for Historic Preservation.

United States Department of Agriculture. (1972). Outdoor classrooms. Washington, D.C.: U.S. Government Printing Office.

Vircan, Lori. (1984, April) Grooming the Grounds. School Product News, pp. 27, 30.

Warf, J.H. (1964). Manual for school administrators on school plant planning. Nashville: Tennessee State Department of Education.

- Webster, Noah. (1965). Webster's Seventh New Collegiate Dictionary. Springfield, Massachusetts: G. & C. Merriam Company.
- Wheary, Herbert. (1983). Building for energy efficiency. Richmond: State Office of Emergency and Energy Services.
- White, Ellen G. (1923). Fundamentals of Christian education. Nashville: Southern Publishing Association.
- White, Ellen G. (1900) Testimonies. (Vol.6) Oakland, California: Pacific Press. p. 187.
- White, Ellen G. (1903). Education. Oakland, California: Pacific Press.
- Whitehead, Alfred. (1957). The aims of education. New York: MacMillan.
- Wilkinson, Raymond K. (1978). A model for the development of educational specifications for small schools. Ed.D. dissertation, Andrews University.
- Young, Paul R. (1977). Elementary lessons in gardening. Cleveland, Ohio: National Garden Institute.

#### STATE DEPARTMENTS

- Alabama, State of. (1975). Handbook on planning school facilities. Montgomery, Alabama: State Department of Education.
- Alaska, State of. (1978). Site selection criteria and evaluation guideline for educational facilities in rural Alaska. Juneau: State of Alaska, Division of Facility Procurement Policy.

Arkansas, State of. (1975). Guidelines for planning school facilities. Little Rock: Arkansas Department of Education.

California, State of. (1966). School site analysis and development. Sacramento: California State Department of Education.

California, State of. (1969). Forty years of school planning. Sacramento: California State Department of Education.

California, State of. (1973). Profile rating wheel: An instrument to evaluate school facilities. Sacramento: Bureau of School Facilities Planning, California State Department of Education.

California, State of. (1976). Guide for the development of a school district long-range comprehensive master plan. Sacramento: California State Department of Education.

California, State of. (1978). Facilities performance profile. Sacramento: California State Department of Education.

Connecticut, State of. (1970). School sites selection and acquisition. Hartford: State Department of Education.

Connecticut, State of. (1980). Safe school guide. Hartford: State Department of Connecticut, Department of Education.

Delaware, State of. (1975). Department of public instruction school construction manual. Dover: State Board of Education.

Florida, State of. (1978). Educational facilities. Tallahassee: State Board of Education.



- Georgia, State of. (1980). A guide to school site selection. Atlanta: Department of Education.
- Hawaii, State of. (1983). Campus development report. Honolulu: Department of Accounting and General Services.
- Idaho, State of. (1972). Manual for school building planning. Boise: State of Idaho; Department of Education.
- Illinois, State of. (1976). Capital assistance program expenditures for construction of new school facilities. Chicago: Capital Development Board.
- Indiana, State of. (no date). Schoolhouse planning. Indianapolis: Department of Public Instruction.
- Iowa, State of. (1974). Recommendations for sites, facilities, and equipment. Des Moines: Department of Public Instruction.
- Kentucky, State of. (no date). Buildings and grounds. Frankfort: Department of Education.
- Maine, State of. (1983) Self-evaluation. Augusta: Department of Education and Cultural Services.
- Maryland, State of. (1983). Public school construction administrative procedures guide. Baltimore: Public School Construction Program.
- Massachusetts, State of. (1977). Regulations governing the school building assistance act-Massachusetts. Boston: Department of Education.
- Michigan, State of. (1973). The community school site: A laboratory for learning. Lansing: Department of Public Instruction.

Minnesota, State of. (1971). Guide for educational planning of public school buildings and sites in Minnesota. St Paul: Documents Section, State Department of Administration.

Mississippi, State of. (1972). Guide for school facility standards and procedures-Mississippi. Jackson, Mississippi: Department of Education.

Montana, State of. (1963). School environment. Helena: State Board of Health.

New Hampshire, State of. (1975). Manual for planning and construction of school buildings. Concord: State Department of Education.

New Jersey, State of. (1977). Greenhouses for schools. Trenton: Department of Education.

New York, State of. (1977). Guide to administrative procedures. Albany: State Department; Division of Educational Facilities Planning.

North Carolina, State of. (no date) Procedures for review and approval of school building plans and for inspection of building projects. Raleigh: Department of Public Instruction.

Pennsylvania, State of. (1980). A guide in the preparation of school sites and facility design requirements. Harrisburg: Department of Education and Bureau of Educational Administration and Management Support Services.

Tennessee, State of. (1964). Manual for school administrators on school plant planning. Nashville: Department of Education.

Vermont, State of. (1972). Planning educational environments. Montpelier: Department of Education.

Virginia, State of. (1983). Building for energy efficiency. Richmond: State Office of Emergency and Energy Services.

Washington, State of. (1981). Site selection and acquisition. Olympia: State Superintendent of Public Instruction.

West Virginia, State of. (1973). Handbook on planning school facilities. Charleston: The Board of Education.

Wisconsin, State of. (1967) School plant planning. Madison: State Department of Public Instruction.

Wyoming, State of. (1977). Rules and regulations for site selection. Jasper: Department of Education.

#### INTERVIEWS

Bauer, Anthony M., Associate Professor and Program Coordinator, Michigan State University Landscape Architecture Program. Interview by author, 20 June 1990. University of Michigan, East Lansing, Michigan.

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